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ABSTRACT

This guide is for an articulated two-year high school, two-year college curriculum for poultry products management developed by two postsecondary and five secondary institutions and representatives of the private sector in Texas. The guide includes the following: (1) a brief description of the occupation of poultry products manager; (2) the basic objective of the curriculum; (3) extensive duty and task lists for poultry products management (including performance objective standard, materials, enabling objectives, and performance guide for each task); (4) a flowchart showing the recommended secondary and postsecondary course options; (5) recommended student prerequisites including academic courses; (6) basic course outlines for grades 9-14; (7) a list of secondary reference materials keyed to courses; (8) a line drawing of recommended secondary facilities; (9) a list of recommended tools/equipment and estimated costs; (10) a competency profile; (11) an example of the student monitoring and follow-up system; (12) career ladder information; (13) recommended teacher approval criteria; and (14) a sample articulation agreement. (KC)

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2+2+2 Articulated Curriculum

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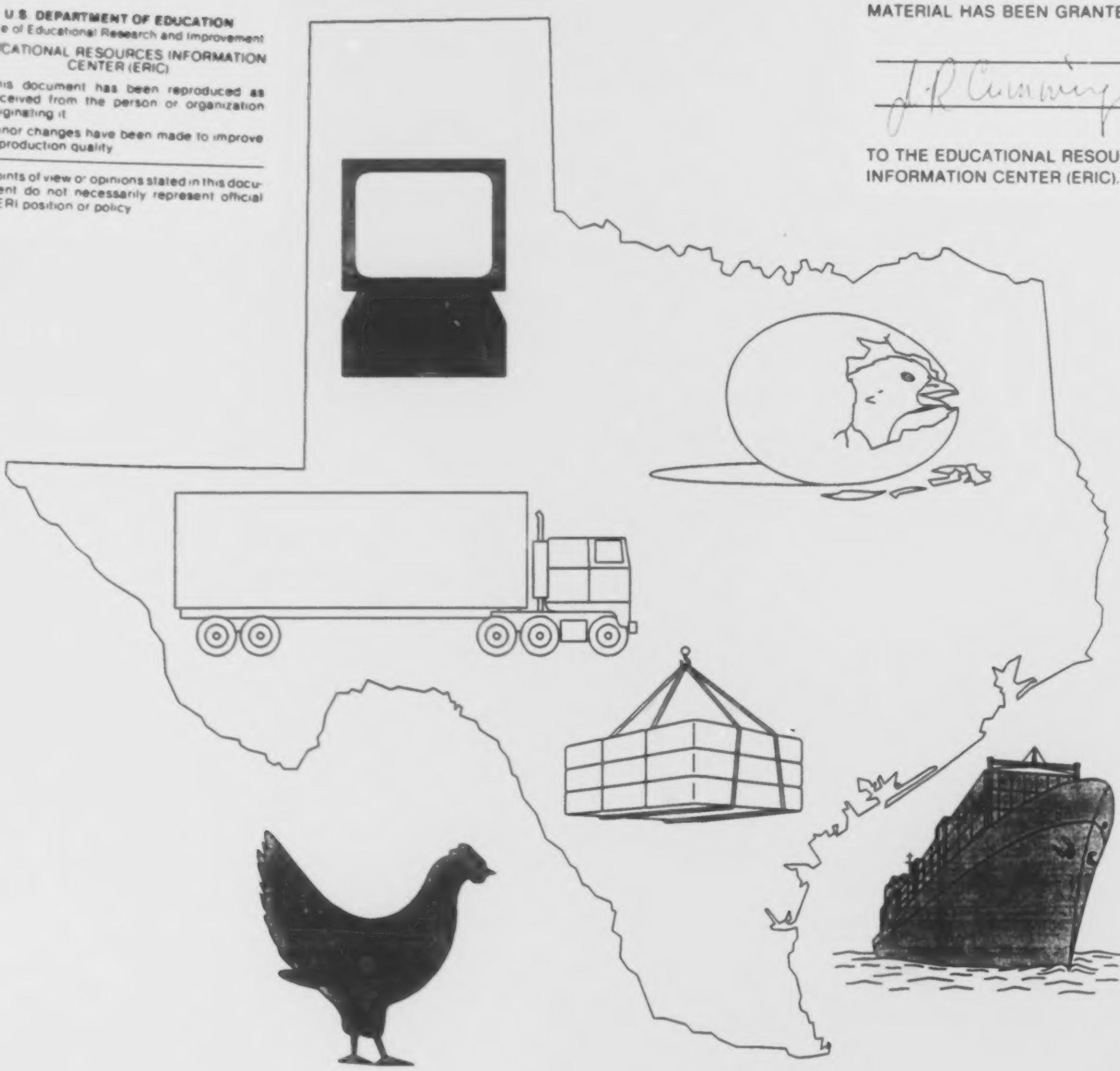

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Poultry Products Management

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"2+2+2" Articulated Agricultural Occupations Project

FIRST YEAR FINAL REPORT

July 1, 1989 - June 30, 1990

FIRST YEAR REPORT

"2+2+2" Articulated Agricultural Occupations Project
Poultry Products Management

Sponsored by:

Texas Education Agency
Division of Vocational Education

and

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Community Colleges and Technical Institutes Division

Conducted by:

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and

Northeast Texas Community College

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The project involved the participation of a number of agricultural industry representatives who provided input concerning the duties and tasks involved in the various agricultural industries relative to this 2+2 project.

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I. FIRST YEAR RESULTS AND BENEFITS

Even with the late start of the project the following activities and products have been produced:

1. A commitment of the two postsecondary and five secondary institutions and representatives of the private sector has been made to develop and implement a "2+2+2 articulated curriculum " for the agricultural occupations of poultry products management, dairy products management, retail florist management, and garden center management.

2. A 2+2+2 articulated curriculum for the occupation of poultry products management has been developed. The 2+2+2 articulated curriculum for the poultry products manager includes:

    a. A brief description of the occupation of poultry products manager.
    b. The basic objective of the curriculum
    c. A flow chart showing the recommended secondary and postsecondary course options
    d. Recommended student prerequisites including academic courses
    e. Basic course outlines for grades 9-14
    f. A list of secondary reference materials
    g. A line drawing of recommended secondary facilities
    h. A list of recommended tools/equipment and estimated costs
    i. A competency profile
    j. An example of the student monitoring and follow-up system
    k. Recommended teacher approval criteria
    l. A sample articulation agreement

The 2+2 +2 articulated curriculum for the poultry products manager is presented on the following pages.

It is anticipated that other school districts and two year postsecondary institutions will be able to use the curriculum as a model for linking instructional activities of secondary and postsecondary education for the preparation of technical workers in the agricultural industry.

II. JOB DESCRIPTION: POULTRY PRODUCTS MANAGER

The poultry products manager directs poultry production either independently or in conjunction with other managers pursuant to the objectives and policies of the employing company or individual.

Utilizes the management process to manage labor in a variety of poultry production settings. Collects data about employees, identifies specific training needs/problems, implements a plan of action, and evaluates outcomes of the initiated plan. Assists with production and procedures according to company policy and customer preferences.

Ensures quality of poultry products by serving as a positive role model for employees supervised. Accepts responsibility in managing, supervising, and teaching employees the importance of product quality to the customer and to the success of the company.

III. CURRICULUM OBJECTIVE

The curriculum is designed to produce an individual with skills, knowledge, and abilities sufficient to begin work as a poultry products manager in either the production or processing area of the poultry industry. The individual should perform safely and effectively in the position assigned to him by his employer. Graduates will be able to work independently or in a supervisory capacity.

IV. DUTY AND TASK LISTING FOR POULTRY PRODUCTS MANAGEMENT

The following is a chart showing the duty and task list for poultry products management. This list was compiled by a panel of poultry products employees. The panel consisted of employees/managers in the poultry production and poultry processing industries.

POULTRY PRODUCTS MANAGEMENT

DUTIES	TASKS									
A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS	1. Hire Production Workers	2. Dismiss Production Workers	3. Prepare Payroll	4. Purchase new or used equipment	5. Lease equipment	6. Purchase supplies	7. Assign duties	8. Train employees	9. Keep records of income and expenses	10. Deposit receipts
A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS	11. Pay bills	12. Keep feed consumption records	13. Keep egg production records	14. Keep egg quality records	15. Keep poultry mortality records	16. Review production contract	17. Keep equipment servicing and maintenance records	18. Arrange for sale of poultry and eggs	19. Arrange financing	20. Obtain insurance on house and equipment
A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS	21. Arrange for construction of poultry house	22. Arrange for purchase of land	23. Arrange for purchase of poultry house	24. Purchase litter	25. Contact flock supervisor or vet when birds appear to be sick	26. Purchase fuel				
B. PREPARING THE HOUSE FOR BIRDS	1. Order Feed	2. Clean walls, screens, ceilings, and equipment	3. Clean feed bins	4. Remove used litter with loader	5. Remove liquid manure with pump	6. Dispose of used litter	7. Prepare litter for reuse	8. Disinfect building and equipment	9. Add clean litter	10. Prepare brooders for reuse
B. PREPARING THE HOUSE FOR BIRDS	11. Prepare automatic feeders	12. Prepare automatic waterers	13. Set up temporary feeders and waterers for young birds	14. Locate curtains for partial house brooding	15. Install brooder guards for young birds	16. Service light fixtures	17. Prepare nests for reuse			
C. CARING FOR BIRDS	1. Adjust lighting	2. Adjust building heating units	3. Adjust ventilation system	4. Adjust supplemental (evaporative) cooling system	5. Fill temporary feeders and waterers	6. Store temporary feeders and waterers	7. Dispose of dead birds	8. Keep birds free of ectoparasites (mites & lice)	9. Keep poultry houses and premises free of house flies	10. Control rodents
C. CARING FOR BIRDS	11. Administer medications	12. Clean medicator	13. Clean feeders and waterers	14. Adjust feeders and waterers	15. Record daily water consumption	16. Record daily feed consumption	17. Provide range shelters for turkeys	18. Control range predators	19. Set up waterers for range turkeys	20. Fill waterers for range turkeys
C. CARING FOR BIRDS	21. Set up feeders for range turkeys	22. Fill feeders for range turkeys	23. Adjust temperature and humidity in egg storage room	24. Cull layers	25. Move turkeys from one facility to another					

POULTRY PRODUCTS MANAGEMENT

DUTIES	TASKS									
D. PREPARING PRODUCTS FOR MARKET	1. Gather and pack eggs	2. Clean eggs (hand method)	3. Grade eggs	4. Refrigerate eggs	5. Remove feed and water from birds prior to market shipment					
E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY	1. Mow grass	2. Maintain all-weather road	3. Clean drainage ditches	4. Apply herbicides	5. Store and inventory supplies	6. Paint buildings	7. Repair roof (small leaks)	8. Tighten doors	9. Clean air inlets	10. Inspect buildings for unwanted air filtration
E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY	11. Test alarm system	12. Test standby power system	13. Service all fuel powered machinery	14. Maintain in-house equipment						
F. RECEIVING	1. Handle birds	2. Stun and kill birds	3. Scald and pick birds							
G. EVISCERATING	1. Prepare carcass	2. Present carcass for USDA inspection	3. Trim carcass	4. Present carcass for final USDA inspection						
H. PACKING	1. Chill carcass or parts	2. Grade carcass or parts	3. Size carcass or parts	4. Tub carcass or parts						
I. FAST FOOD CUT-UP	1. Co-ordinate products	2. Separate birds	3. Observe quality	4. Package products						
J. DEBONING	1. Halve birds	2. Package legs	3. Debone front half	4. Tub and weigh parts						

POULTRY PRODUCTS MANAGEMENT

DUTIES	TASKS									
K. INSTANT QUICK FREEZING	1. Pack in freezer	2. Perform glaze test	3. Package parts							
L. STORAGE	1. Separate product	2. Rotate products to coolers	3. Conduct inventory							
M. SHIPPING	1. Co-ordinate route sales	2. Sanitize trucks	3. Maintain vehicle temperature control	4. Generate billing						
N. PLANT SANITATION	1. Remove waste products	2. Prepare chemicals	3. Sanitize the facilities and equipment	4. Perform final inspection						

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 1. Hire Production Workers

****

Performance Objective: Given materials listed below, hire production workers.

Standard: The production workers hired must be qualified for the job in accordance with advertised job description.

Materials Needed: Job Openings, Applicants, Completed Applications, Structured Interview, Reference Check, Job Description.

Enabling Objectives: Know how to conduct interview.

Performance Guide:

1. Review job description
2. Advertise job opening
3. Furnish application form to applicants
4. Review completed applications
5. Schedule interviews
6. Hold interviews
    a. Explain job description and qualifications required for job
    b. Give applicant opportunity to ask questions
7. Make reference checks
8. Select worker
9. Hire worker

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 2. Dismiss Production Workers

****

Performance Objective: Given materials listed below, dismiss production workers.

Standard: All workers requiring termination must be dismissed following dismissal guidelines.

Materials Needed: Employees to be dismissed because of

a. unsatisfactory performance of duties.
b. situation which no longer requires a worker.

Job Description, Guidelines for Employee Dismissal.

Enabling Objectives: Know the laws governing job dismissal.

Performance Guide:

1. Identify situation or action supporting need for dismissal
2. Evaluate worker's performance and situation
3. Review situation with worker
4. Inform worker of dismissal
5. Give worker an opportunity to respond and react to notice of dismissal
6. Document dismissal
7. Make final financial settlement

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 3. Prepare Payroll

****

Performance Objective: Given materials listed below, prepare payroll.

Standard: The payroll must be prepared without error, showing gross and net wages due each employee, and must be distributed on designated schedule.

Materials Needed: Employees, Completed Pay Period, Employee Salary or Wage Scale, Employee Payroll Deductions, Employee Time Sheets or Cards, State and Federal Tax Tables.

Enabling Objectives: Know how to read and interpret tax table.
Know how to use calculator.

Performance Guide:

1. Assemble time sheets or cards, employee wage scale, tax tables, and payroll deductions
2. Compute number of hours each employee has worked
3. Compute gross salary (number of hours times wage rate)
4. Compute payroll deductions
5. Compute net salary (gross salary less payroll deductions)
6. Review payroll computations to insure accuracy
7. Prepare statement of wages and deductions for each employee
8. Prepare check
9. Place statement and check in envelope
10. File payroll records
11. Distribute pay envelopes to employees at designated time

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 4. Purchase New or Used Equipment

****

Performance Objective: Given materials listed below, purchase new or used equipment.

Standard: Purchased equipment must be in keeping with farm needs, price, financing, service, availability, and delivery date requirements.

Materials Needed: Need for Equipment Which Improves Efficiency or Increases Income (new or used addition or replacement); Information on Available Alternatives; Price Lists, Including Discounts, Charges for Delivery or Installation; and Financing Charges, Delivery, or Installation Schedule Information.

Enabling Objectives: Know how to use catalogs.

Performance Guide:

1. Identify equipment needed
2. Assemble catalogs, price lists and any available related information for purchasing equipment
3. Talk with someone presently operating same or similar equipment
4. Verify that purchasing would be better than leasing or repairing
5. Review information and decide which equipment buy is best
6. Set up equipment payment schedule
7. Place order with supplier
8. Follow up on promised delivery schedule to insure compliance
9. Insure that proper installation is made
10. Complete warranty information

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 5. Lease Equipment

****

Performance Objective: Given materials listed below, lease equipment

Standard: Leased equipment must be in keeping with farm needs, price, financing, service, availability, and delivery date requirements.

Materials Needed: Need for Equipment Which Improves Efficiency or Increases Income (addition or replacement), Information on Available Alternatives, Complete Information on Terms of Lease, Delivery or Installation Schedule Information.

Enabling Objectives: None.

Performance Guide:

1. Identify equipment needed
2. Assemble equipment leasing costs and related information
3. Talk with someone presently operating same or similar equipment
4. Verify that leasing would be better than purchasing or repairing
5. Review information and decide which equipment leasing arrangement is best

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 6. Purchase Supplies

****

Performance Objective: Given the materials listed below, purchase supplies.

Standard: Supplies must be purchased to satisfy quality and quantity farm requirements.

Materials Needed: Need for Supplies, Available Suppliers, Supplies on Hand, Supply Catalogs or Related Information, Price Lists Showing Discounts/Extra Charges.

Enabling Objectives: Know how to use supply catalogs or related information.

Performance Guide:

1. Make list of needed supplies, including amounts of each
2. Check prices and delivery schedules
3. Make selections
4. Set up supplies payment schedule
5. Order supplies
6. Follow up on delivery of supplies noting quality, quantity, and condition

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 7. Assign Duties

****

Performance Objective: Given the materials listed below, assign duties to employees.

Standard: Duty assignments must outline work to be performed, standard of acceptable performance, and designated time frame.

Materials Needed: Employee, List of Duties to be Performed, Time When Duties are Expected to be Completed, Knowledge of How to Perform Each Duty.

Enabling Objectives: Know how to perform all duties.

Performance Guide:

1. Assign duties to be performed by employees
2. Explain and demonstrate, if necessary, how to perform each duty and the standard of acceptable performance
3. Inform employee about time for completion of assignment
4. Ask employee if there are questions about any duty
5. Answer all questions thoroughly
6. Insure that employee has clear understanding of all duties to be performed and when they are to be completed
7. Follow up on duties that were assigned

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 8. Train Employees

****

Performance Objective: Given the materials listed below, train employees.

Standard: Training must be conducted to meet specified employee needs.

Materials Needed: Employees, Tools or Equipment for Each Job.

Enabling Objectives: Knowledge of employees' skills and abilities. Knowledge of how to perform jobs.

Performance Guide:

1. Identify employee or employees requiring training
2. Plan training session, identifying
    a. Objectives
    b. Participants
    c. Time requirement
    d. Materials and information needed
3. Conduct training session
    a. Identify purpose
    b. Present information
    c. Demonstrate points
    d. Provide question and answer time
    e. Encourage discussion whenever appropriate
    f. Summarize points at conclusion of training
    g. Give employee opportunity to demonstrate skill
4. Review training session procedures to determine if modifications should be made

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 9. Keep Records of Income and Expenses

****

Performance Objective: Given the materials listed below, keep records of income and expenses.

Standard: Records of all monies received and paid out must be maintained without error.

Materials Needed: Fiscal Period (month, quarter), Journal, Ledger or Record Book, Receipts, Invoices, Supporting Papers, Deposit Slips, Checkbooks, Pen, Pencil, Calculator, Computer.

Enabling Objectives: Know how to use a computer.
Know how to use a calculator.
Know how to read and interpret accounting records.

Performance Guide:

Accounting Method (hand)

1. Secure journal and ledger
2. Enter all receipts and expenses in journal
3. At end of accounting period (monthly, quarterly), total columns in journal
4. Insure that journal balances
5. Post from journal to ledger (column totals and individual entries as appropriate)
6. Verify ledger after all items have been posted from journal
7. Close out ledger at end of fiscal period
8. File receipts, invoices, supporting papers, and deposit slips
9. Return journal and ledger to designated area

Accounting Method (computerized)

1. Record income and expenses using commercially prepared software package or other data entry program following directions and procedures as required to process data
2. File receipts, invoices, supporting papers, and deposit slips

****

Recordkeeping Method

1. Secure record book used for recording financial data
2. Enter all receipts and expenses in record book using workable recordkeeping method
3. Verify accuracy of entries
4. At end of fiscal period (monthly or quarterly), compute totals
5. File receipts, invoices, supporting papers, and deposit slips
6. Return record book to designated area

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 10. Deposit Receipts

****

Performance Objective: Given materials listed below, deposit receipts.

Standard: At designated intervals, receipts, tabulated in deposit slip format along with endorsed checks, must be deposited in bank and validated by bank receipt.

Materials Needed: Cash or Checks Received, Deposit Slip (Duplicate), Pen, Banking Institution.

Enabling Objectives: Know how to fill out deposit slips.

Performance Guide:

1. List total cash to be deposited on deposit slip
2. List each check separately on deposit slip
3. Total checks and cash
4. Total deposit slip
5. Verify that actual cash/check total and deposit slip total agree
6. Endorse checks
7. Make deposit at bank
8. Obtain validated deposit slip or receipt from bank
9. File validated deposit slip or receipt

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 11. Pay Bills

****

Performance Objective: Given materials listed below, pay bills.

Standard: All bills must be verified and paid by due date, without error, with discounts for early payment applied to amount due.

Materials Needed: Calculator, Bills to be Paid with Discounts and Due Dates, Supporting Documents, Checkbook, Pen, Envelopes, Postage Stamps, Stapler or Paper Clips.

Enabling Objectives: Know how to use and balance checkbook.

Performance Guide:

1. Match each bill with supporting documents and staple or clip together
2. Determine date that bill must be paid
3. Verify gross amount of bill due
4. Compute all applicable discounts
5. Compute net amount due
6. Write check for correct amount
7. Mark bill paid, with date and check number
8. Address and stamp envelope
9. Place check in envelope, accompanied by invoice copy or stub, if required
10. Mail payment
11. File paid bills and supporting documents

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 12. Keep Feed Consumption Records

****

Performance Objective: Given materials listed below, keep feed consumption records.

Standard: Feed consumption records must be maintained and monitored without error during growout period; and feed conversion factor must be computed and recorded when birds are marketed.

Materials Needed: Weigh Tickets Received at Time Feed Truck Makes Deliveries, Log Book or Tablet for Recording Daily Feed Consumption, a Chart or Formula to Determine Amount of Feed That is Needed Daily, Feed in Feed Bins, Scales.

Enabling Objectives: Know how to calculate feed conversions.
Know how to use calculator.

Performance Guide:

1. Record amount of feed on hand (scale reading or approximation) on feed consumption record for each flock
2. As feed is delivered, record amount, using weight ticket
3. Record amount of feed consumed daily (scale reading or approximation) on feed consumption record
4. As Steps 2 and 3 above are recorded, compute and record running total of feed on hand
5. Monitor feed consumption daily for each flock, using a predetermined formula as a guideline
6. When birds are marked:
    a. Verify amount of feed delivered by supplier
    b. Calculate feed conversion using market weight of birds and total amount of feed consumed
    c. Record feed conversion figure

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 13. Keep Egg Production Records

****

Performance Objective: Given materials listed below, keep egg production records.

Standard: Permanent egg production records must summarize daily egg and weekly percent of production and must agree with sales records within two percent.

Materials Needed: Daily Production Charts, Calculator, Pencil, Permanent Egg Production Record Form, Sales Records, Number of Hens.

Enabling Objectives: Know how to do math calculations.
Know how to use record forms.

Performance Guide:

1. Assemble daily egg production charts
2. Transfer daily egg production figures to permanent egg production record form
3. Compute weekly total
4. Compute weekly percent of egg production:

   $$\frac{\text{Number of eggs produced per week}}{\text{Number of hens x 7}} = \text{weekly percent of egg production}$$
5. Record weekly percent of production on permanent egg record form
6. Compare total weekly egg production with sales record provided by producer
7. If figures agree within two percent, file permanent egg record form
8. If figures do not agree within two percent
   a. Insure that pickup dates for sale of eggs agree with farm records
   b. Recheck egg count computations
9. Recompute weekly percent of egg production
10. Note changes on permanent egg record form

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 14. Keep Egg Quality Records

****

Performance Objective: Given the materials listed below, keep egg quality records.

Standard: Egg quality records must contain a summary of weekly grade-out figures provided by the egg processor.

Materials Needed: Permanent Egg Quality Charts for Each Flock, Weekly Grade-out Records for Each Flock, Calculator, Pencil.

Enabling Objectives: Know how to use and file records and reports.

Performance Guide:

1. Assemble weekly grade-out records for each flock
2. Record grade-out figures on permanent chart
3. Compute totals of egg quality chart at the end of designated time period
4. File reports

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 15. Keep Poultry Mortality Records

****

Performance Objective: Given the materials listed below, keep poultry mortality records.

Standard: The number of dead birds must be recorded daily for each poultry room/house, and weekly and running totals must be computed and recorded for duration of growing cycle.

Materials Needed: Record Sheet (Mortality Card), Pencil, Dead Birds.

Enabling Objectives: None.

Performance Guide:

1. Check poultry rooms/houses daily for dead or cull birds
2. Record number of dead and culled birds on mortality card
3. Compute weekly total by units or houses
4. Compute running total
5. Repeat steps 1 through 4 daily for each room or house until birds go to market

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 16. Review Production Contract

****

Performance Objective: Given the materials listed below, review production contracts.

Standard: Production contract must contain all required information and must meet grower and contracting company requirements.

Materials Needed: Written Contract(s), Contractor Representative, Attorney, Previous Production Contracts, Other Growers.

Enabling Objectives: Know what the current market conditions are.

Performance Guide:

1. Review production contract carefully
2. Verify information
   a. Terms of payment for birds (amount per pound)
   b. Incentives
   c. How weights will be determined
   d. Stipulation of unusual restrictions or requirements
3. Ask contractor's representative to explain terms or passages you do not understand
4. If other contracts are available, make comparisons
5. Talk to grower presently on contract in question
6. Consult attorney as required
7. Decide on best contract
8. Sign contract

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 17. Keep Equipment Servicing and Maintenance Records

****

Performance Objective: Given the materials listed below, keep equipment servicing and maintenance records.

Standard: All equipment servicing and maintenance records must be periodically reviewed; follow-up actions must be initiated; and service reports must be filed in designated folders.

Materials Needed: Service and Maintenance Reports and Record Forms, Pencil, Equipment Inventory Files.

Enabling Objectives: Know how to read and interpret various records.

Performance Guide:

1. Assemble service and maintenance records
2. Review service and maintenance records
    a. Review any unusual malfunctions
    b. Check for any service/maintenance that falls within warranty
    c. Determine follow-up action
3. Initiate follow-up action required for Step 2
4. File service reports in designated equipment inventory folders

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 18. Arrange for Sale of Poultry and Eggs

****

Performance Objective: Given the materials listed below, arrange for sale of poultry and eggs.

Standard: All poultry and eggs must be sold on scheduled dates according to sales contract.

Materials Needed: Poultry and Eggs to be Sold, Telephone, List of Prospective Buyers, Sales Contract.

Enabling Objectives: Know the legalities of contract sales.

Performance Guide:

1. Identify number of birds or eggs to be sold
2. Establish date of movement
3. Contact prospective buyers
4. Give buyers number of eggs or number, breed and age of birds available
5. Request bid by specified date
6. Review bid responses
7. Finalize sale of poultry and eggs to highest bidder
8. Complete sales contract

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 19. Arrange Financing

****

Performance Objective: Given the materials listed below, arrange financing.

Standard: Financing which is most favorable to farmer (interest rate and repayment schedule) must be arranged.

Materials Needed: Lending Institutions Available, Financial Records, Amount of Money Needed, Proof of Need, and Ability to Pay, Cash Flow Projection by Month for One Year.

Enabling Objectives: Know the methods of determining interest. Know how to prepare paperwork associated with borrowing money.

Performance Guide:

1. Determine the amount of financing needed
2. Locate all available sources
3. Compare terms
4. Select preferred source
5. Assemble complete financial data on your operation and justification for need
6. Confer with loan officer at preferred source
7. Obtain financing
8. Complete paperwork
9. If unsuccessful, review other loan sources
10. Reapply at second institution, repeating Steps 5 through 8
11. File papers
12. Complete transaction if loan is approved
13. Note repayment schedule on calendar

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 20. Obtain Insurance on House and Equipment

****

Performance Objective: Given the materials listed below, obtain insurance on house and equipment.

Standard: Insurance coverage must be obtained at the most economical price which will cover replacement cost of house and equipment and which will meet other liability and extended coverage needs.

Materials Needed: House and Equipment to be Insured, Insurance Agencies, Safety Deposit Box, Fireproof Filing Cabinet.

Enabling Objectives: Know about the various types of insurance available.

Performance Guide:

1. Determine coverages and amount of insurance needed to protect investment
    a. Fire
    b. Extended coverage
    c. Liability
2. Identify reputable agencies
3. Determine most competitive companies with best coverage
    a. Contact each company
    b. Specify coverage and amount of insurance desired
    c. Review settlement process (time and procedures)
    d. Request bids
    e. Analyze information
4. Select insurance company
5. Sign contract
6. Pay premiums as stipulated
7. File insurance contracts in safe area (safety deposit box or fireproof filing cabinet)

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 21. Arrange for Construction of Poultry House

****

Performance Objective: Given the materials listed below, arrange for construction of poultry house(s).

Standard: A poultry house meeting space, cost, and construction requirements must be built upon designated site.

Materials Needed: Justification for New Poultry House, Dependable Building Contractor, Building Materials Company, Available Financing or Cash, Building Site for Poultry House, Production Contractor, Specifications for Poultry House, Building Permit.

Enabling Objectives: Know what is needed in order to have a properly equipped poultry house.

Performance Guide:

1. Obtain production contractor's approval for construction of poultry house
2. Decide on location of house
3. Plan construction of house
    a. Size
    b. Type of construction
4. Request bids from several qualified building contractors
5. Select building contractor and negotiate price
6. Obtain firm price on all building materials and labor needed
7. Arrange financing
8. Sign contract covering all aspects of building construction
9. Obtain building permits
10. Supervise all phases of construction

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 22. Arrange for Purchase of Land

****

Performance Objective: Given the materials listed below, arrange for purchase of land.

Standard: Land that meets projected poultry operation requirements must be selected and purchased.

Materials Needed: Situation Requiring Purchase of Land, Tracts of Land of Type Desired, Available Financing, Legal and Other Favorable Considerations.

Enabling Objectives: Know what type of land is needed for poultry operations.

Performance Guide:

1. Determine the size of operation eventually to be built
2. Determine amount of land needed, including buffer zones
3. Locate tracts of land available
4. Check zoning and building permit requirements
5. Check availability of water and electricity
6. Check soil percolation for septic system if dwelling is to be located on farm
7. Check attitudes of close neighbors
8. Select land for purchase
9. Negotiate price
10. Arrange financing
11. Purchase land

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 23. Arrange for Purchase of Poultry House

****

Performance Objective: Given the materials listed below, arrange for purchase of poultry house.

Standard: Poultry house that meets specified grower requirements at a price consistent with its value must be purchased.

Materials Needed: Need to Purchase Poultry House, Available Poultry House, Available Financing, Production Contractor.

Enabling Objectives: Know the management aspects of poultry production.
Know what is needed to equip a poultry house.

Performance Guide:

1. Identify poultry house to purchase
2. Examine poultry house for
   a. Suitability for designated use
   b. State of repair of building
   c. Maintenance level of equipment
3. Check for adequate and potable water supply
4. Confer with production contractor on whether building meets stipulated standards
5. Check previous flock records for evidence of disease
6. Compute cost of repairs or renovations meeting contractor specifications
7. Negotiate price
8. Arrange financing
9. Purchase house

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 24. Purchase Litter

****

Performance Objective: Given the materials listed below, purchase litter.

Standard: Litter which meets grower specifications (type, amount, and quality) must be purchased.

Materials Needed: Poultry House Prepared for Clean Litter, Truck (for pickup) and Canvas, Amount and Type of Litter to be Purchased.

Enabling Objectives: Know about poultry diseases and parasites. Know about qualities of different kinds of litter.

Performance Guide:

1. Determine type of litter needed
2. Determine amount of litter needed for poultry house
3. Decide on where to purchase litter, considering
    a. Availability
    b. Price
    c. Convenience
    d. Quality
4. Place order for litter
5. Pick up litter or have it delivered
6. Check invoice to insure accuracy
7. Unload litter

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 25. Contact Flock Supervisor or Veterinarian When Birds Appear to be Sick

****

Performance Objective: Given the materials listed below, contact the flock supervisor or veterinarian when birds appear to be sick.

Standard: The flock supervisor or veterinarian must be contacted when birds are sick.

Materials Needed: Telephone, Two-way Radio, Egg Production Records, Feed and Water Consumption Records, Mortality Records, Sick Birds, Veterinarian, Flock Supervisor.

Enabling Objectives: Know the symptoms of poultry diseases and parasites.

Performance Guide:

1. Visually examine birds in affected house
2. Review poultry records to analyze abnormal conditions regarding
    a. Egg production
    b. Feed and water consumption
    c. Mortality
3. Determine whether an abnormal condition exists
4. Contact flock supervisor or veterinarian, depending upon individual grower's situation (contract or independent)

DUTY: A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

TASK: 26. Purchase Fuel

****

Performance Objective: Given the materials listed below, purchase fuel.

Standard: Brooder fuel that meets farm requirements must be purchased at a competitive price from a source that is dependable for quality and on-time delivery.

Materials Needed: Poultry House Equipped with Brooder System, Fuel Storage Facility (oil or gas tank), Fuel Supplier.

Enabling Objectives: Know about the various types of fuel available.

Performance Guide:

1. Determine type and quantity of fuel needed
2. Determine projected delivery schedule
3. Contact potential suppliers to determine if
    a. Type and quantity of fuel is available
    b. Acceptable delivery schedule can be arranged
    c. Delivered price is acceptable
4. Obtain references from suppliers whenever possible
5. Check references for supplier reliability
6. Decide upon supplier
7. Place order
8. Follow up to see that order is filled as specified
9. Obtain delivery ticket
10. Pay for fuel
11. Repeat Steps 7 through 10 when fuel must be purchased

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 1. Order Feed

****

Performance Objective: Given the materials listed below, order feed.

Standard: Specified type and amount of feed must be ordered at designated intervals or a feed supply contract negotiated to assure continuous feed supply.

Materials Needed: Low Feed Inventory, Phone, Feed Manufacturer/Supplier.

Enabling Objectives: Know the parts and functions of the digestive system of poultry.

Performance Guide:

Contract Grower

1. Monitor feed supply at farm
2. Place order for feed one or two working days prior to scheduled pickup, specifying type, quantity, and date needed

Independent Grower

1. Negotiate a feed supply contract with feed manufacturer or supplier
2. Monitor feed inventory level
3. Place order for feed one or two working days prior to scheduled pickup

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 2. Clean Walls, Screens, Ceilings, and Equipment

****

Performance Objective: Given the materials listed below, clean walls, screens, ceiling, and equipment in a poultry house.

Standard: Walls, screens, ceiling, and equipment must have dust removed and be washed with required disinfectant and dried.

Materials Needed: High-pressure Blower, High-pressure Sprayer and Hose, Approved Disinfectant, Scouring Pad, Sprayer Tank/Water Hose, Water Supply, House to be Cleaned, Goggles and Respirator, Broom.

Enabling Objectives: Know the safety involved in the use of chemicals.
Know how to operate a high pressure sprayer.

Performance Guide:

1. Assemble blower, high-pressure sprayer and hose, and sprayer tank
2. Turn exhaust fans on in poultry house
3. Put on respirator and goggles
4. Blow dust from walls, screens, ceilings, and equipment, using high-pressure blower
5. Turn off exhaust fans and lights in room being cleaned
6. Wash walls, screens, ceiling, and equipment using high-pressure sprayer and scouring pad (Note: Use disinfectant if required, following all safety precautions)
7. Remove respirator and goggles
8. Drain sprayer tank and hose
9. Dry Poultry house if needed
   a. Sweep standing water from floor
   b. Turn exhaust fans on
10. Store equipment

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 3. Clean Feed Bins

****

Performance Objective: Given the materials listed below, clean the feed bins.

Standard: All previous feed must be removed from bins, and dust must be removed by use of high-pressure blower or spray washing.

Materials Needed: Feed Bins to be Cleaned, Broom, Scraper, High-pressure Sprayer, Water Supply, Water Hose, Ladder, Rope, Disinfectant (optional), High-pressure Blower.

Enabling Objectives: Know how feed bins are built.
Know about various cleaning chemicals.

Performance Guide:

1. Assemble tools and equipment
2. Place bucket or other container under feed bin spout
3. Empty feed bins, removing all feed
4. Store feed
5. Enter bin using ladder and rope
6. Scrape all caked and dried feed from sides using scraper
7. Sweep and remove all matter from bins
8. Clean bins with water or high-pressure blower
   (Note: Disinfectant is optional)
9. Return tools and equipment to storage

Note Safety Precautions:

1. Ventilate bins before entering
2. Have another person present in event of accident

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 4. Remove Used Litter with Loader

****

Performance Objective: Given the materials listed below, remove the used litter from a poultry house with a loader.

Standard: All used litter must be removed by loader without damage to poultry room/house.

Materials Needed: Poultry Room/House with Used Litter, Loader, Respirator, Goggles, Barn Scraper, Scoop, Water Hose, Water Supply, Garden Tractor with Blade, Broom.

Enabling Objectives: Know how to operate a loader.
Know how to operate a spreader.

Performance Guide:

1. Check fuel, oil, and water in loader
2. Remove all obstacles in the poultry house that may be in the way of the loader
3. Open doors to allow loader access
4. Open curtains and turn on exhaust fans to allow dust and ammonia to escape
5. Remove litter from around posts and walls using barn scraper or scoop
6. Scoop up and remove used litter, using loader
7. Empty litter into truck or spreader
8. Dispose of used litter
9. Repeat Steps 5 through 8 until all used litter has been removed
10. Sweep floor
11. Remove goggles and respirator
12. Wash loader
13. Return loader to storage area
14. Turn fans off and close doors

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 5. Remove Liquid Manure with Pump

****

Performance Objective: Given the materials listed below, remove the liquid manure with a pump.

Standard: All manure must be removed from poultry house on regularly scheduled basis, collected in holding tank, and moved to fields as required.

Materials Needed: Holding Tank with Pump, Flush System, Tractor/Blade, Honey Wagon with Pump and Spreader.

Enabling Objectives: Know how to operate tractor and honey wagon.

Performance Guide:

1. Remove manure from poultry house to holding tank by one of the following
    a. Tractor and Blade
    b. Flush system
2. Pump manure from holding tank into honey wagon
3. Transport to field for fertilizer
4. Remove liquid manure from wagon using pump and spreader

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 6. Dispose of Used Litter

****

Performance Objective: Given the materials listed below, dispose of used litter.

Standard: Used litter must be disposed of (a) by selling to outside buyer or (b) placing in designated area away from poultry house.

Materials Needed: Truck or Manure Spreader, Loader or Other Means to Load Litter, Disposal Area for Litter, Shovel, Room with Used Litter, Prospective Buyers.

Enabling Objectives: Know how to operate loader.
Know how to operate spreader.

Performance Guide:

Disposal by Selling

1. Contact prospective buyers
2. Negotiate price of used litter
3. Decide upon buyer
4. Schedule pickup date for litter
5. Load litter into trucks using loader or by hand
6. Repeat Step 5 until all litter has been removed and loaded

Disposal by Dumping in Designated Farm Area

1. Determine disposal area for litter
2. Load litter into trucks or spreader using loader or by hand
3. Haul litter to designated disposal area for spreading on crop or pasture land at a later date
4. Unload litter
5. Repeat Steps 2 through 4 until all used litter has been removed and taken to storage area
6. Store trucks, spreaders, and loaders

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 7. Prepare Litter for Reuse

****

Performance Objective: Given the materials listed below, prepare litter for reuse.

Standard: Litter prepared for reuse must be free of large chunks of old caked litter, aired or treated with chemicals to eliminate ammonia, and dry.

Materials Needed: Used Litter, Goggles/Respirator, Blower, Front-end Loader, Chemical to Treat Used Litter (Litter-aid, Super Phosphate, etc.), Truck, Centrifugal Spreader for Dispensing Chemical(Cyclone Spreader), Pitchfork, Shovel, Spreader, Rotary Tiller or Harrow (Litter Getter).

Enabling Objectives: Know how to operate tractor.

Performance Guide:

1. Assemble tools and equipment
2. Put on goggles/respirator
3. Blow dust and cobwebs from poultry house, using blower
4. Remove caked and wet litter to spreader or truck, using front-end loader
5. Eliminate ammonia by
    a. Adding ammonia suppressing chemicals to remaining litter in house or,
    b. Airing house
        (1) Turn on fans
        (2) Open curtains and doors
6. Stir litter using a rotary tiller (Litter Getter) or disc harrow
7. Add new litter in brooding areas
8. Remove goggles/respirator
9. Dispose of used litter
10. Return tools and equipment to storage

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 8. Disinfect Building and Equipment

****

Performance Objective: Given materials listed below, disinfect building and equipment.

Standard: Building and equipment must be cleaned and disinfected before new birds arrive.

Materials Needed: High-pressure Sprayer, High-pressure Hose with Suitable Nozzle to Disperse Spray, Large Tank or Barrel for Mixing and Holding Spray Solution, Water Supply, Approved Disinfectant, Poultry House/Room Free of Litter, Safety Glasses or Goggles.

Enabling Objectives: Know about chemicals used for disinfectants.
Know how to operate high-pressure sprayer.

Performance Guide:

1. Measure approved disinfectant and water into tank
2. Set up sprayer and hose
3. Start sprayer and saturate all equipment and the walls, ceiling and floor of building with disinfectant
4. Close building as tightly as possible to get full effect of disinfect (at least 12 hours)
5. Empty spray tank, sprayer, and hose and flush with water
6. Return sprayer, tank, and hose to storage
7. Open building, and let it dry out completely. (If necessary, use fans to force air in)

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 9. Add Clean Litter

****

Performance Objective: Given materials listed below, add clean litter.

Standard: Clean litter must be evenly distributed to recommended depth on poultry house floor and dried before new birds arrive.

Materials Needed: Building Prepared for Clean Litter, Clean Litter, Scoops , Spreader, Side-delivery Rake, Litter Spreader.

Enabling Objectives: Know how to operate a tractor and side delivery rake.
Know how to operate litter spreader.

Performance Guide:

1. Bring clean litter into building
2. Spread clean litter evenly over entire surface of floor to recommended depth
3. Dry litter
   a. Open inlets or curtains and turn fans on in warm weather
   b. Turn heat on in cold weather
4. Turn heat off or close inlets or curtains when litter is dry

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 10. Prepare Brooders for Reuse

****

Performance Objective: Given materials listed below, prepare brooders for reuse.

Standard: All brooders must be clean and in operating order.

Materials Needed: Blower, Dirty Brooders, Wire for Cleaning Brooder Jets, Gas Supply, Pliers, Wrenches, Miscellaneous, Replacement Parts.

Enabling Objectives: Know how to operate brooder.

Performance Guide:

1. Turn off gas from brooder
2. Blow dust from all parts of brooder, using blower
3. Remove jet and clean
4. Reassemble brooder
5. Turn gas supply on and light pilot light
6. Test pilot light and flame
7. Repeat process if flame is not satisfactory (White/blue flame is good flame)
8. Replace jet or orifice if flame is not satisfactory
9. Repeat Steps 5 and 6 to insure that replacement of jet or orifice has corrected problem

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 11. Prepare Automatic Feeders

****

Performance Objective: Given materials listed below, prepare automatic feeders.

Standard: Automatic feeders must be cleaned, adjusted for optimum level of feed, and full of feed for new birds.

Materials Needed: Feeders in Working Condition (cleaned and adjusted), Feed Supply, Auger or Conveyor Feed System, Hand Tools.

Enabling Objectives: Know how to operate and repair auger or conveyor feed systems.

Performance Guide:

1. Inspect feeder lines and pans for damaged or missing parts
2. Make repairs or replace missing parts
3. Lower automatic feeders to desired height
4. Turn on automatic feeder motor, and let pans fill with feed, no more than 24 hours prior to delivery of birds
5. Inspect pans to note level of feed and to insure that no feed is leaking on floor, through error in adjustment or breaks in line or pan

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 12. Prepare Automatic Waterers

****

Performance Objective: Given materials listed below, prepare automatic waterers.

Standard: Automatic waterers must be cleaned and disinfected, in working order, and filled with water and adjusted to maintain the required level.

Materials Needed: Waterers, 5 Gallon Pail, Steel Wool or Similar Scouring Pads, Waterer Pulleys, Cable, and Suspension System, Approved Disinfectant, Water Supply, Screwdriver, Pliers, Wrenches, Miscellaneous Replacement Parts.

Enabling Objectives: Know about different disinfectants.
Know how to use basic tools.

Performance Guide:

1. Assemble pail, disinfectant, steel wool, screwdriver, pliers, and wrenches
2. Prepare approved disinfectant solution, following instructions precisely
3. Inspect waterer for broken or missing parts
4. Lower waterers on cables to check pulleys, cable, and suspension system
5. Remove trough from cradle
6. Wash waterer with disinfectant solution
7. Replace trough on cradle
8. Lower entire waterer to desired height for birds
9. Turn water on and adjust valve to regulate water in trough
10. Repair malfunctioning valves
11. Replace gaskets in valves as required
12. Flush water lines to insure clean water supply
13. Return tools and supplies to storage
14. Fill waterers with clean water 24 hours prior to arrival of birds
15. Inspect waterers often to insure that correct water level is maintained

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 13. Set Up Temporary Feeders and Waterers for Young Birds

****

Performance Objective: Given the materials listed below, set up temporary feeders and waterers for young birds.

Standard: Temporary feeders and waterers must be filled with feed and water and situated in poultry room/house according to contract specifications.

Materials Needed: Temporary Feeders, Temporary Waterers, Feed, Wheelbarrow and Buckets to Distribute Feed, Water Hose, Water Supply, Poultry Room/House, Contract Specifications.

Enabling Objectives: None.

Performance Guide:

1. Remove from storage and visually inspect all temporary feeders and waterers for cracks and missing parts
2. Discard or repair damaged feeders and waterers depending upon situation
3. Place temporary feeders and waterers on poultry house floor, under edge of heat pipes or around edge of stoves according to contract or contractor specifications
4. Fill wheelbarrow or feed cart with feed
5. Assemble buckets and water hose
6. Fill all temporary feeders with designated feed
7. Fill temporary waterers
8. Return wheelbarrow, unused feed, supplies and tools to designated storage area

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 14. Locate Curtains for Partial House Brooding

****

Performance Objective: Given the materials listed below, locate curtains for partial house brooding.

Standard: Curtains or partitions must be positioned so they are stabilized and air leaks are minimized.

Materials Needed: Curtains or Partitions, Control Pan, Wooden Supports(used only with curtains), Hammer, Screwdriver, Poultry Rooms/House.

Enabling Objectives: None.

Performance Guide:

1. Put curtain or partition in place
2. Position wooden supports to stabilize curtains
3. Attach supports to floor, walls, and ceiling to prevent air leaks
4. Activate intermediate control pan
5. Repeat Steps 1 through 3 for all poultry houses

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DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 15. Install Brooder Guards for Young Birds

****

Performance Objective: Given the materials listed below, install brooder guards for young birds.

Standard: Brooder guards (approximately 12 inches high and 8 feet in diameter) must be assembled and installed to provide a confined area around the brooder.

Materials Needed: Flexible Corrugated Cardboard (Approximately 12" high), Staple Gun, Brooders, Knife for Cutting Cardboard, Brooder Guard Holders/Supports, 1/2" Reversible Drill and Attachment, Hoe, Rake.

Enabling Objectives: None.

Performance Guide:

Building Temporary Guards

1. Obtain corrugated cardboard
2. Cut length to make an 8 feet diameter circle (to hold approximately 400 birds)
3. Clamp or staple ends of brooder guard to make circle
4. Install metal brooder guard holders/supports
5. Position brooder guard around brooder
6. Repeat process for each brooder in the brooding house

Preinstalled Guards

1. Connect drill and wrench attachment to the wrench located in the ceiling
2. Reverse drill and lower the chick guards on both sides of the house
3. Use hoe or rake to rake shavings against the chick guard

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 16. Service Light Fixtures

****

Performance Objective: Given the materials listed below, service light fixtures.

Standard: All broken light bulbs and fixtures must be replaced; and all light fixtures and bulbs must be cleaned and in working condition.

Materials Needed: Light Receptacles, Light Bulbs or Fluorescent Tubes, Cloths to Wipe Bulbs, Breaker or Fuse Panel, Screwdriver, Pliers.

Enabling Objectives: Know the basics of electricity.
Know the safety rules involved in using electricity.
Know how to check for hot wires and short circuits.

Performance Guide:

1. Inspect all light fixtures and bulbs
2. Replace all broken fixtures and bulbs, using appropriate replacement bulbs (Note: Electricity must be turned off at the breaker or fuse panel before replacing receptacles)
3. Clean receptacles and bulbs using dry cloth
4. Turn on electricity to see that all light bulbs and receptacles are in working order
5. Dispose of broken receptacles and bulbs in designated method

DUTY: B. PREPARING THE HOUSE FOR BIRDS

TASK: 17. Prepare Nests for Reuse

****

Performance Objective: Given the materials listed below, prepare nests for reuse.

Standard: All nests must be cleaned, disinfected, repaired, and have new litter placed in them.

Materials Needed: Nests, Water Supply, Approved Disinfectant, Scraper, Litter, Water Hose/Sprayer, Miscellaneous Hand Tools.

Enabling Objectives: None.

Performance Guide:

1. Remove used litter and debris from nest
2. Remove nest from house
3. Wash and spray nest with approved disinfectant
4. Repair nests, if needed
5. Replace nest in house
6. Bed with new litter

DUTY: C. CARING FOR BIRDS

TASK: 1. Adjust Lighting

****

Performance Objective: Given the materials listed below, adjust lighting.

Standard: Broilers, Turkeys: Continuous light should be used for the first two weeks of the growing cycle. Then depending upon the situation (housing type - curtain sided or totally enclosed, feeding space level, season of the year, bird health consideration, pigmentation needs, etc.) a program of continuous and intermittent illumination should be used for the remainder of the growing period.

Production birds: Continuous light should be used for one week. Then depending on the facilities, constant day length (8 to 10 hours) or step down lighting until sexual maturity should be practiced. At sexual maturity, day length should be increased to a minimum of 14 hours to stimulate egg production. Light is normally increased to 17 hours over the production cycle. Always remember to never increase day length in growing birds (for egg production) and never increase day length on birds in egg production.

Materials Needed: Lighting System Equipped with Calibrated Dimmer, Time Clock and/or Photoelectric Cells, Light Meter.

Enabling Objectives: Know how to set timers for lights.
Know how to read a light meter.
Know how to adjust photoelectric cells.

Performance Guide:

Broiler Chickens/Turkeys

1. Adjust lighting intensity for brooding
    a. Chickens: Five to six footcandles (minimum)
    b. Turkeys: Twelve footcandles (minimum)

****

2. Reduce lighting weekly until desired minimum intensity of one-half to one footcandle is reached
    a. Chickens: Four weeks
    b. Turkeys: Ten weeks
3. Adjust time clock so that lights come on before darkness and go off at dawn
4. Continue to adjust clock to coincide with day length
5. Adjust photoelectric cell to maintain minimum intensity during daylight hours in open-sided house

Production birds

1. Develop step-down program for pullets in windowed (non-light control) house
    a. Determine day length at onset of sexual maturity (20-22 weeks)
    b. Plan step-down program according to day length
2. Put step-down program into operation using time clock with stops
3. Adjust lighting intensity during growing/production cycle
    a. Day 1: Five to six footcandles
    b. In four to six weeks, reduce intensity to one-half footcandle
    c. Maintain one-half footcandle intensity for remaining growing/production cycle
4. Adjust photoelectric cell to maintain minimum intensity during daylight hours in open-sided house

DUTY: C. CARING FOR BIRDS

TASK: 2. Adjust Building Heating Units

****

Performance Objective: Given the materials listed below, adjust building heating units.

Standard: A brooding temperature of 85 degrees F for chickens and 95 degrees F for turkeys must be established initially and reduced five degrees a week until 70 degrees F (possibly 65 degrees F for growing turkeys) is reached.

Materials Needed: Thermometer, Thermostat (which may be located on brooder), Brooders, Calendar.

Enabling Objectives: Know how to read a thermometer.
Know how to adjust brooder height.

Performance Guide:

1. In cold weather, turn units on 24 hours before birds arrive
2. Adjust thermostat(s) to provide desired temperature throughout house
    a. 85 degrees F for chickens
    b. 95 degrees F for turkeys
3. Adjust brooder height to provide desired heat distribution
4. Check thermostats periodically to insure that temperature is being maintained
5. Reduce thermostat settings five degrees weekly until a minimum of 70 degrees F is reached (possibly 65 degrees F for growing turkeys)
6. Use brooder guards for young birds

DUTY: C. CARING FOR BIRDS

TASK: 3. Adjust Ventilation System

****

Performance Objective: Given the materials listed below, adjust the ventilation system.

Standard: Temperature and humidity levels must be regulated in a naturally or mechanically ventilated house as follows: Temperature within two to four degrees of desired level. Relative humidity of 50 to 65 percent. Litter moisture of 25 to 30 percent.

Materials Needed: Thermostats, Curtain Controls (hand or automatic winch), Inlet Controls (hand or automatic winch), Recycling Timer, Thermostat.

Enabling Objectives: Know how to read thermostats and thermometers.
Know how to operate curtain controls.
Know how to set an electrical timer.

Performance Guide:

Naturally Ventilated House

1. Control curtain openings (summer and winter) to maintain the following temperature and moisture levels
   a. Temperature two to four degrees above desired maintained level
   b. Relative humidity 50 to 65 percent
   c. Litter moisture 25 to 30 percent
   d. Ammonia level no greater than 30 ppm

Mechanically Ventilated House

1. Set thermostat two to four degrees above desired maintained temperature
2. Adjust recycling timers daily to aid fans in maintaining moisture balance in house as follows:
   a. Relative humidity 50 to 65 percent
   b. Litter moisture 25 to 30 percent
   c. Ammonia level no greater than 30 ppm
3. Adjust air inlets to maintain inlet velocity between 600 and 1,000 feet per minute

DUTY: C. CARING FOR BIRDS

TASK: 4. Adjust Supplemental (Evaporative) Cooling System

****

Performance Objective: Given the materials listed below, adjust supplemental (evaporative) cooling system.

Standard: The cooling system must be adjusted daily to get maximum cooling in hot weather (> 85 degrees F) without overwetting the litter.

Materials Needed: Automatic or Manual Curtains, Automatic Fans Controlled by Thermostat, Poultry House with End Doors, Thermostatic Controls, Curtain Raising and Lowering Mechanism, Hand Crank.

Enabling Objectives: Know how to read thermostats and thermometers.
Know how to operate curtain controls.
Know how to set an electrical timer.

Performance Guide:

1. Set fan thermostats at 2 to 4 degrees above desired house temperature
2. Set supplemental cooling thermostats above fan thermostat (Note: The precise setting is determined by (a) outside relative humidity (dewpoint temperature) in conjunction with (b) the ability to break down water particle sizes)
3. Monitor litter conditions throughout day and readjust cooling thermostat in order to maintain litter moisture of 25 to 30 percent
4. Re-examine house condition each morning and adjust thermostats as may be needed

DUTY: C. CARING FOR BIRDS

TASK: 5. Fill Temporary Feeders and Waterers

****

Performance Objective: Given the materials listed below, fill temporary feeders and waterers.

Standard: All temporary feeders and waterers must be adjusted to required height, leveled, and filled with feed and water.

Materials Needed: Temporary Feeders, Temporary Waterers, Feed, Water Supply, Water Hose, Buckets, Medication, Wheelbarrow/Feed Cart.

Enabling Objectives: None.

Performance Guide:

Waterers

1. Adjust and level waterers
2. Replace waterers in designated locations
3. Refill with water
4. Add medication if required

Feeders

1. Adjust and level feeders
2. Remove litter from feeders before filling
3. Fill with feed to specified level
4. Replace feeders in designated locations

DUTY: C. CARING FOR BIRDS

TASK: 6. Store Temporary Feeders and Waterers

****

Performance Objective: Given the materials listed below, store temporary feeders and waterers.

Standard: All temporary feeders and waterers must be emptied, cleaned and disinfected, dried, and stored in protected area.

Materials Needed: Temporary Feeders, Temporary Waterers, Storage Place (Room), Hand Putty Knife, Disinfectant, High-pressure Sprayer, Water Hose and Nozzle, Water Supply, Hand Brush.

Enabling Objectives: Know how to use disinfectants.

Performance Guide:

1. Empty unused feed and water from temporary feeders and waterers
2. Remove temporary feeders and temporary waterers to work area and disassemble
3. Mix disinfectant with water and fill high pressure sprayer with solution
4. Place temporary feeders and waterers on wash rack and clean with disinfectant solution
5. Allow temporary feeders and waterers to dry
6. Store in protected area

DUTY: C. CARING FOR BIRDS

TASK: 7. Dispose of Dead Birds

****

Performance Objective: Given the materials listed below, dispose of dead birds.

Standard: All dead birds must be disposed of by one of the following methods: disposal pit, freezer, (for transfer to offal plant), or incinerator.

Materials Needed: Dead Birds, Freezer, Incinerator, Disposal Pit, Wheelbarrow/Cart, Truck, Offal Plant.

Enabling Objectives: Know hazards associated with dead carcasses.

Performance Guide:

1. Collect all dead birds daily
2. Record number of birds disposed of on mortality record
3. Dispose of dead birds by one of the following methods:
    a. Freezer (for sale to render)
    b. Incinerator
    c. Disposal Pit

DUTY: C. CARING FOR BIRDS

TASK: 8. Keep Birds Free of Ectoparasites (Mites and Lice)

****

Performance Objective: Given the materials listed below, keep birds free of ectoparasites (mites and lice).

Standard: Birds must be kept free of ectoparasites.

Materials Needed: Birds with Mites or Lice; Approved and Recommended Pesticide; Pesticide Application Equipment for Dust, Spray, or Fog; Protective Equipment (face mask, goggles) and Clothing; Water Supply; Soap; Towels; Equipment Clean-up Materials (water, ammonia, liquid detergent).

Enabling Objectives: Know the symptoms of lice and mites.
Know how to mix and apply pesticides.

Performance Guide:

1. Identify pest(s)
2. Obtain recommended pesticide
3. Check pesticide application equipment and safety equipment to insure proper functioning
4. Don safety equipment (face mask, goggles, and protective clothing if necessary)
5. Mix pesticide according to directions on label
   a. Follow all safety precautions
   b. Mix only amount of pesticide that is needed for immediate use
6. Fill application equipment with pesticide
7. Apply pesticide to birds in cages
   a. Spray of Dust: Apply directly to underside and vent area of birds
   b. Fog: Spray fog into air in building (not directly on birds)
8. Clean equipment after usage
9. Remove safety equipment and protective clothing

DUTY: C. CARING FOR BIRDS

TASK: 9. Keep Poultry Houses and Premises Free of House Flies

****

Performance Objective: Given the materials listed below, keep poultry houses and premises free of house flies.

Standard: Houses must be kept as free of flies as possible.

Materials Needed: House Infested with Flies, Approved and Recommended Pesticide for Premise Application, Pesticide Application Equipment, Protective Equipment (face mask, goggles, and clothing), Water Supply, Soap, Towels, Equipment Cleanup Materials (water and liquid detergent), Agreement with Feed Supply Company for Mixing Larvadex with Feed.

Enabling Objectives: Know how to mix and apply pesticides.
Know how to operate application equipment.

Performance Guide:

1. Obtain recommended pesticide
2. Check pesticide application equipment and safety equipment to insure proper functioning
3. Don safety equipment (face mask, goggles, and protective clothing if necessary)
4. Mix pesticides according to directions on label
    a. Follow all safety precautions
    b. Mix only amount of pesticide that is needed for immediate use
5. Fill application equipment with pesticide
6. Apply pesticide to poultry house, following all safety precautions
7. Clean equipment after usage
8. Remove safety equipment and protective clothing

DUTY: C. CARING FOR BIRDS

TASK: 10. Control Rodents

****

Performance Objective: Given the materials listed below, control rodents.

Standard: Rodents must be controlled by chemical means, and entry points must be closed.

Materials Needed: Rodents (rats and mice); Bait Containers; Prepared Bait or Bait Concentrate; Hand Scoop; Mixing Tub, Vat, or Bucket; Hand Tools and Miscellaneous Repair Materials (hammer, hand saw, lumber or plywood, nails).

Enabling Objectives: Know the characteristics of different rodents.

Performance Guide:

1. Identify type of rodent
2. Collect bait
3. Fill bait containers
4. Set the filled bait containers near rodent evidence (Note: Follow all recommended safety precautions)
5. Check, refill, and relocate bait containers as needed
6. Dispose of rodent carcasses
7. Close and repair rodent entry points
8. Remove, clean, and store bait containers after rodents have been controlled

DUTY: C. CARING FOR BIRDS

TASK: 11. Administer Medications

****

Performance Objective: Given the materials listed below, administer medications.

Standard: Prescribed medication must be administered to sick birds according to medication instructions.

Materials Needed: Sick Birds, Prescribed Medications, Medicator, Instructions for Administering Medications, Record Forms.

Enabling Objectives: Know how to measure.
Know how to operate medicator.

Performance Guide:

1. Assemble prescribed medication and medicator
2. Read directions and determine dosage
3. Measure dosage and fill medicator
4. Connect medicator to water supply
5. Turn medicator on
6. Insure that medicator is working properly
7. Check medicator periodically to insure that medication is being dispersed
8. Refill medicator as needed
9. Remove medicator when medication period is completed
10. Clean medicator

DUTY: C. CARING FOR BIRDS

TASK: 12. Clean Medicator

****

Performance Objective: Given materials listed below, clean medicator.

Standard: The medicator must be cleaned and free of all previous medication.

Materials Needed: Clean Work Area, Clean Cloths or Paper Towels, Cleaning Solution, Medicators to be Cleaned, Water Supply.

Enabling Objectives: Know how to mix various cleaning solutions.

Performance Guide:

1. Set up work area
    a. Obtain cleaning solution and clean cloths
    b. Collect medicator to be cleaned
2. Flush medicator with water or cleaning solution
3. Disassemble medicator
4. Clean valves individually with solution and water
5. Rinse medicator
6. Reassemble medicator
7. Test medicator to insure it is working properly
8. Place medicator in plastic bag and store

DUTY: C. CARING FOR BIRDS

TASK: 13. Clean Feeders and Waterers

****

Performance Objective: Given materials listed below, clean feeders and waterers.

Standard: All feeders must have caked or stale feed removed, must have scum or film removed, must be disinfected as needed, and must be flushed with clean water.

Materials Needed: Dirty Feeders and Waterers, Water Hose, Hand Brush, Bucket, Screwdriver or Scraper, Hand Scoop, Water Supply.

Enabling Objectives: Know about disinfectants used for cleaning.

Performance Guide:

Feeders

1. Loosen caked and stale feed using scraper
2. Remove caked and stale feed with hand scoop
3. Repeat Steps 1 and 2 until all feeders are cleaned
4. Dispose of stale feed
5. Refill with feed

Waterers

1. Drain water from waterers
2. Use hand brush to scrub entire waterer, using disinfectant as needed
3. Flush waterer
4. Dispose of dirty water
5. Refill with water

DUTY: C. CARING FOR BIRDS

TASK: 14. Adjust Feeders and Waterers

****

Performance Objective: Given materials listed below, adjust feeders and waterers.

Standard: All feeders and waterers must be adjusted to the average back height of the birds and level.

Materials Needed: Feeders and Waterers, Electric Drill, Chain, Hand Crank, Growth of Birds (growing birds).

Enabling Objectives: Know how to operate feeder and water raising equipment.

Performance Guide:

Chain, Hand Crank or Electric Drill Methods

1. Identify feeders and waterers to be raised
2. Determine average back height of birds
3. Raise feeders and waterers to height determined in Step 2 using crank or electric drill or chain, insuring that feeders and waterers are level
4. Return tools to storage

DUTY: C. CARING FOR BIRDS

Task: 15. Record Daily Water Consumption

****

Performance Objective: **Given materials listed below, record daily water consumption.**

Standard: Water consumption must be computed and recorded daily without error.

Materials Needed: Water Supply, Water Meter, Chart for Recording Water, Pencil, Calculator (optional), Scheduled Time for Recording Water Consumption (once or twice daily).

Enabling Objectives: Know how to read a water meter.

Performance Guide:

1. Read water meter
2. Record meter reading on chart
3. Compute water usage by subtracting previous meter reading from current meter reading
4. Record water usage computation on chart
5. Repeat Steps 1 through 4 for each house

DUTY: C. CARING FOR BIRDS

TASK: 16. Record Daily Feed Consumption

****

Performance Objective: Given the materials listed below, record daily feed consumption.

Standard: The daily feed consumption must be computed and recorded without error.

Materials Needed: Feed Supply, Scales for Weighing, Chart for Recording Feed Consumption, Pencil, Calculator, Weigh Delivery Ticket.

Enabling Objectives: Know how to operate and read scales.

Performance Guide:

Scales Method

1. Read feed weighing scale
2. Record scale reading on feed consumption chart
3. Compute amount of feed used by subtracting previous scale reading from current scale reading
4. Record computation on chart

Weigh Delivery Ticket Method

1. Read and record weigh ticket for amount of feed delivered
2. Compute daily feed consumption by dividing the number of pounds of feed delivered by the number of days between deliveries (computed upon receipt of weight ticket)
3. Record daily feed consumption calculation on chart

DUTY: C. CARING FOR BIRDS

TASK: 17. Provide Range Shelters for Turkeys

****

Performance Objective: Given the materials listed below, provide range shelters for turkeys.

Standard: Range shelters (approximately 10′ x 10′or 10′ X 12′) providing roosting and covering needs for birds must be built and located on designated range.

Materials Needed: Range, Turkeys, Field (range) Shelters, Portable Feeders, Portable Waterers, Nails, Hammer, Saw, New or Used Materials Which are as Cost Efficient as Possible.

Enabling Objectives: Know how to use basic carpentry tools.

Performance Guide:

1. Determine number of range shelters needed
2. Construct field range shelters if not available
   - a. Decide upon size of shelters (10′ x 10′ or 10′ x 12′)
   - b. Assemble designated materials and tools for constructing shelters
   - c. Cut materials to size
     - (1) Metal
     - (2) Skids
     - (3) Framing
   - d. Assemble shelters
   - e. Repeat procedure for desired number of shelters
3. Locate shelters (adjacent to one another) in turkey range area considering:
   - a. Accessibility
   - b. Seasonal variations
   - c. Terrain
   - d. Weather conditions

DUTY: C. CARING FOR BIRDS

TASK: 18. Control Range Predators

****

Performance Objective: Given materials listed below, control range predators.

Standard: Field situation must be monitored daily, and predator damage must be minimized.

Materials Needed: Loss of Birds, Predators (foxes, dogs, bears, raccoons, rats, hawks, skunks, wild birds), Barriers (scarecrow, noisemaker, confined or secured dog, traps).

Enabling Objectives: Know how to identify predator problems.

Performance Guide:

1. Determine type of predator causing problem
2. Secure assistance of county or state trapper
3. Plan a program to eliminate predators from premises prior to and during range use, including the following barriers:
    a. Scarecrow
    b. Noisemaker
    c. Confined or secured dog
    e. Traps
4. Implement elimination program utilizing barriers noted in Step 3
5. Monitor field situations daily
6. Dispose of predators which may have been trapped

DUTY: C. CARING FOR BIRDS

TASK: 19. Set up Waterers for Range Turkeys

****

Performance Objective: Given materials listed below, set up waterers for range turkeys.

Standard: The required number of waterers must be set up on range in designated locations.

Materials Needed: Waterers, Truck, Range, Tractor and Farm Wagon.

Enabling Objectives: Know how to operate tractor and truck.

Performance Guide:

1. Determine number of waterers needed
2. Get used waterers from storage
3. Purchase new waterers, as required
4. Transport waterers to field range
5. Locate waterers in designated locations in range area

DUTY: C. CARING FOR BIRDS

TASK: 20. Fill Waterers for Range Turkeys

****

Performance Objective: Given materials listed below, fill waterers for range turkeys.

Standard: All waterers must be filled with water.

Materials Needed: Waterers (automatic or manual), Water Supply (well, spring, or public water), Water Supply Tank (250 to 500 gallon) with Hose, Tractor with Farm Wagon.

Enabling Objectives: Know how to operate tractor.
Know how to adjust automatic waterer.

Performance Guide:

Manual Method

1. Install water supply tank on farm wagon or truck
2. Fill water supply tank and transport to range area
3. Fill water supply units located in range area
4. Return water supply tank to work area for use as needed

Automatic Method

1. Hook water hose to holding unit
2. Check automatic float level to assure optimum operational condition
3. Adjust automatic float units as necessary

DUTY: C. CARING FOR BIRDS

TASK: 21. Set Up Feeders for Range Turkeys

****

Performance Objective: Given materials listed below, set up feeders for range turkeys.

Standard: The required number of feeders must be set up on range in designated locations.

Materials Needed: Feeders, Truck or Tractor and Farm Wagon, Range.

Enabling Objectives: Know how to operate tractor and truck.

Performance Guide:

1. Determine number of feeders needed
2. Remove used feeders from storage
3. Inspect feeders to insure good working order
4. Repair feeders to field range and locate in designated locations

DUTY: C. CARING FOR BIRDS

TASK: 22. Fill Feeders for Range Turkeys

****

Performance Objective: Given materials listed below, fill feeders for range turkeys.

Standard: All feeders must be filled with prescribed feed to desired level.

Materials Needed: Feeders, Feed Supply, Tractor or Truck with Feed Auger System.

Enabling Objectives: Know how to operate tractor and truck.
Know safety rules regarding augers.

Performance Guide:

1. Load feed and transport to range area
2. Fill feeders
    a. Open lid of feeder
    b. Place auger in feeder
    c. Auger feed into feeder to desired level
    d. Remove auger and close lid
3. Repeat Step 2 until all feeders are filled

DUTY: C. CARING FOR BIRDS

TASK: 23. Adjust Temperature and Humidity in Egg Storage Room

****

Performance Objective: Given materials listed below, adjust temperature and humidity in egg storage room.

Standard: Temperature and humidity must be checked daily to insure desired levels are maintained:
Table or commercial eggs: Temperature 45 degrees to 55 degrees F; humidity 75%
Hatching eggs: Temperature 60 degrees to 70 degrees F; humidity 75%.

Materials Needed: Eggs, Storage Room, Thermometer, Hygrometer, Thermostat, Cooling Unit, Humidifier, Heating Unit Under Special Circumstances, Humidistat.

Enabling Objectives: Know how to read thermometer and hygrometer.
Know how to adjust thermostat and humidstat.

Performance Guide:

1. Read thermometer and hygrometer in egg storage room daily
2. Record readings
3. Adjust thermostat and humidstat according to egg storage requirements
4. If adjustments were necessary in Step 3, recheck temperature and humidity levels on an hourly basis until desired levels are stabilized

DUTY: C. CARING FOR BIRDS

TASK: 24. Cull Layers

****

Performance Objective: Given materials listed below, cull layers.

Standard: All nonproductive birds must be removed from flock.

Materials Needed: Chicken Flocks, Hooks.

Enabling Objectives: Know the characteristics of productive vs. nonproductive birds.

Performance Guide:

1. Visually examine flock and remove birds which appear to be unproductive
   a. For floor flocks, use hook to catch birds
   b. For cage flocks, remove from cage
2. Examine birds as follows:
   a. Comb
   b. Rear end
   c. Pigmentation of beak and legs
3. Dispose of birds which are determined to be unproductive

DUTY: C. CARING FOR BIRDS

TASK: 25. Move Turkeys from one Facility to Another

****

Performance Objective: Given materials listed below, move turkeys from one facility to another.

Standard: All birds must be moved safely by walkway or turkey tote without harm to birds.

Materials Needed: Brooding House, Grow-out House, Temporary Fence for Walkway, Turkey Tote (trailer with hydraulic belt), Tractor, Turkeys to be Moved, Materials for Temporary Pen, Tools.

Enabling Objectives: Know how to operate tractor.
Know characteristics of turkeys.

Performance Guide:

By Walkway

1. Erect temporary pen in brooding house
2. Drive turkeys into pen
3. Drive turkeys from pen into walkway leading to grow-out house
4. Repeat Steps 2 and 3 until all turkeys have been moved

By Turkey Tote

1. Position trailer at door adjacent to holding pen
2. Drive turkeys from house into pen to ramp on trailer
3. Lift trailer hydraulically into moving position
4. Transport turkeys to grow-out house
5. Unload turkeys
6. Repeat Steps 1 through 5 until all turkeys have been moved. Note: Turkeys must be moved observing ease of handling and avoidance of overcrowding

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 1. Gather and Pack Eggs

****

Performance Objective: Given materials listed below, gather and pack eggs.

Standard: All eggs must be gathered, placed in flats, large end up, oiled, with no broken or cracked eggs and placed in cooler.

Materials Needed: Eggs, Baskets, Egg Flats, Carts or Racks, Conveyors/Delivery Belts, Egg Packer, Container for Discarding Broken Eggs, Hand Sprayer for Oiling Eggs.

Enabling Objectives: Know how to operate sprayer.
Know how to operate and maintain an egg packer.

Performance Guide:

Hand Method

1. Prepare cart and egg flats
2. Collect eggs and place in flats, large end up
3. Spray eggs with oil
4. Place eggs in cooler

Automatic Egg Packer Method

1. Insure that packer is operating properly
2. Insure that packer has a continuous supply of egg oil, if machine has this feature
3. Load empty flats in packer
4. Turn packer on
5. Start delivery belts
6. Observe feeding of eggs to insure there is even distribution
7. Remove eggs that are
   a. Cracked or broken
   b. Extremely dirty
8. Observe oil sprayer component periodically to insure eggs are being oiled
9. Clean oiling mechanism periodically, following manufacturer's directions

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 1. Gather and Pack Eggs (Continued)

****

10. Correct any problems that cause automatic shutdown of equipment, observing manufacturers directions and safety precautions
11. Stack filled flats on cart/rack
12. Turn off machine
13. Place racks of eggs in egg holding room
14. Record daily egg count and maintain egg-holding room inventory

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 2. Clean Eggs (Hand Method)

****

Performance Objective: Given the materials listed below, clean eggs by the hand method.

Standard: All soil must be removed from eggs that are sold for commercial or table use.

Materials Needed: Soiled Eggs, Egg Washer, Egg Detergent, Water Supply, Oil, Oil Applicator.

Enabling Objectives: Know how to operate egg washer.
Know how to operate oil applicator.

Performance Guide:

1. Fill egg washer with water to correct level
2. Heat water to correct temperature (110 degrees F)
3. Add detergent and mix
4. Place eggs in washer
5. Turn machine on
6. Remove eggs at end of cleaning cycle
7. Turn machine off
8. Separate eggs which are impossible to clean from clean eggs (unclean eggs are designated Grade B if not broken)
9. Oil eggs when specified by market requirements

Note: Eggs that are automatically packed are not washed prior to delivery to processing plant. They may, however, be oiled

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 3. Grade Eggs

****

Performance Objective: Given the materials listed below, grade the eggs.

Standard: Eggs must be graded according to size and exterior and interior quality specified in USDA Egg Grading Manual, (Agricultural Handbook No. 75).

Materials Needed: Hand Scales, Candling Light, Eggs, Cartons, USDA Manual.

Enabling Objectives: Know how to operate egg candler.
Know how to use egg scales.

Performance Guide:

On-Farm Hand Grading Method

1. Using egg candle, determine interior and exterior quality of eggs, noting standards specified in USDA Egg Grading Manual
2. Remove eggs with
   a. Cracks
   b. Blood spots
   c. Other imperfections such as odd-shape or rough shells
   d. Dirt or excess stain
3. Weigh eggs on hand scales to determine weight classification, as specified in USDA Egg Grading Manual
4. Carton eggs according to weight classifications and quality grades

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 4. Refrigerate Eggs

****

Performance Objective: Given the materials listed below, refrigerate eggs.

Standard: Eggs for consumption must be refrigerated as follows: Storage (a) for less than seven days at 55 degrees to 65 degrees F or (b) for more than seven days 45 degrees to 55 degrees F and humidity range of 75 to 85%. Hatching eggs must be maintained at temperature range of 60 degrees to 68 degrees F and humidity range of 75 to 80%.

Materials Needed: Insulated Room (cooler), Cooling Unit, Thermometer, Humidistat, Eggs, Dehumidifier/Humidifier, Water Hose/Water Supply.

Enabling Objectives: Know how to adjust thermostats.
Know how to operate the humidifier and dehumidifier.

Performance Guide:

1. Place eggs in cooler as soon as gathered
2. Adjust temperature and humidity to the specified levels
    a. To raise humidity
        (1) Use humidifier or
        (2) Run water lightly on floor of egg room
    b. To lower humidity, use dehumidifier
3. Check temperature and humidity of cooler once or twice daily

DUTY: D. PREPARING PRODUCTS FOR MARKET

TASK: 5. Remove Feed and Water From Birds Prior to Market Shipment

****

Performance Objective: Given the materials listed below, remove feed and water from birds prior to market shipment.

Standard: Feed and water must be removed from birds at time specified by processing plant.

Materials Needed: Orders from Processing Plant Specifying Time to Remove Feed, Feeder System/Waterers, Hand Crank or Electric Drill, Telephone.

Enabling Objectives: Know how to operate equipment that raises and lowers feeders and waterers.

Performance Guide:

1. Contact processing plant to identify when birds are to be moved
2. Determine time to raise feeders and waterers
3. Raise feeders and waterers using electric drill or hand crank
   Note: Waterers are usually raised three or four hours later than feeders

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 1. Mow Grass

****

Performance Objective: Given the materials listed below, mow the grass.

Standard: Grass must be mowed to specified height using lawn mower, or tractor and rotary cutter and trimmer.

Materials Needed: Lawn Mower, Tractor, Rotary Cutter (bushog), Trimmer, Grass to be Mowed, Storage Place.

Enabling Objectives: Know how to operate and maintain mower.
Know how to operate and maintain tractor and rotary mower.
Know how to operate a trimmer.

Performance Guide:

1. Identify area to be mowed and check for obstacles
2. Check and service equipment before using
3. Mow grass in small areas with lawn mower
4. Mow grass in large areas with tractor and rotary cutter (bushog)
5. Use trimmer to get around obstacles unable to reach with mower or rotary cutter
6. Clean lawn mower and rotary cutter
7. Return mower, trimmer and/or tractor and rotary cutter to storage

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 2. Maintain All-weather Road

****

Performance Objective: Given the materials listed below, maintain an all-weather road.

Standard: All-weather road must be maintained by leveling and filling all holes and removing ice and snow when needed.

Materials Needed: All-weather Road (slate, gravel, hardtop), Tractor, Scraper Blade, Skid Steer Loader, Road Repair Materials.

Enabling Objectives: Know how to operate tractor and equipment.

Performance Guide:

1. Identify all-weather road to be maintained
2. Determine maintenance needed (leveling and filling of holes or removal of snow and ice)
3. Determine type of equipment needed
4. Check and service equipment before using
5. Hook scraper blade to tractor
6. Level and fill holes in all-weather road (slate and gravel) using tractor and scraper blade or skid steer loader
7. Remove ice and snow on all-weather road as needed using tractor and scraper blade or skid steer loader
8. Unhook scraper blade from tractor
9. Place scraper blade in storage
10. Store tractor and/or skid steer loader

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 3. Clean Drainage Ditches

****

Performance Objective: Given the materials listed below, clean drainage ditches.

Standard: All drainage ditches must be cleaned to allow run-off water to flow freely.

Materials Needed: Drainage Ditches, Tractor, Scraper Blade, Skid-Steer Loader, Shovel, Pick.

Enabling Objectives: Know how to operate tractor.

Performance Guide:

1. Identify drainage ditches to be cleaned
2. Plan how to clean drainage ditches
3. Clean drainage ditch using tractor and scraper blade, skid-steer loader, and/or hand tools
4. Clean equipment after usage
5. Return tractor, scraper blade, and hand tools to storage

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 4. Apply Herbicides

****

Performance Objective: Given the materials listed below, apply herbicides.

Standard: All herbicides must be mixed, applied to designated areas, and excess disposed of, observing all safety precautions and directions.

Materials Needed: Herbicide, Water, Sprayer, Measuring Device, Rubber Gloves, Air Filter, Goggles, Protective Clothing, Area to be Treated With Herbicide, Flock Supervisor.

Enabling Objectives: Knowledge of different herbicides and their uses.
Know how to operate sprayer.

Performance Guide:

1. Identify areas to be treated with herbicide
2. Determine type of herbicide to use by consulting with flock supervisor
3. Locate sprayer and herbicide
4. Read herbicide label directions carefully
5. Review operation of sprayer
6. Put on safety apparatus
   a. Rubber gloves
   b. Goggles
   c. Air Filter
   d. Protective Clothing
7. Mix herbicide as directed on label and pour into sprayer tank
8. Fill the sprayer with prescribed amount of water
9. Mix solution in sprayer thoroughly
10. Build pressure by pumping sprayer
11. Apply herbicide to area to be treated following application and safety directions
12. Dispose of excess herbicide mixture in acceptable method
13. Clean herbicide residues from sprayer thoroughly with soap and warm water
14. Store sprayer
15. Remove safety apparatus

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 5. Store And Inventory Supplies

****

Performance Objective: Given the materials listed below, store and inventory supplies.

Standard: New supplies must be counted and recorded on inventory form: supplies on hand must be verified by physical count and on inventory form; and all supplies must be placed in designated storage areas with any special storage or safety considerations observed.

Materials Needed: Storage Room, Inventory of Supplies on Hand, New Supplies to be Stored, Inventory Record Forms, Pencil.

Enabling Objectives: Know how to use inventory forms.

Performance Guide:

1. Locate supply inventory record
2. Identify supplies to be stored and supplies on hand
3. Inventory and store supplies as follows:
    a. Count number of items on hand in each category and verify on inventory record
    b. Count new supply of items
    c. Total a and b
    d. Record on inventory record
    e. Place items in designated space observing storage and safety requirements
4. Repeat Step 3 until all supplies have been counted, recorded, and stored
5. File inventory record

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 6. Paint Buildings

****

Performance Objective: Given the materials listed below, paint buildings.

Standard: Paint must cover designated surface of buildings with a protective, smooth, and even texture.

Materials Needed: Buildings That Need to be Painted, Airless Paint Sprayer, Air Paint Sprayer with Compressor, Paint, Ladder, Respirator/Protective Clothing, Water, Supplies to Clean Sprayer (for oil or latex paint).

Enabling Objectives: Know how to operate airless or air type sprayer.

Performance Guide:

Contractor Method

1. Select reputable paint contractor
2. Negotiate details of job to be done
    a. Completion dates
    b. Type of paint
    c. Cost
3. Sign contract
4. Pay contractor upon satisfactory completion of job

Owner or Farmer Method

1. Select equipment to be used
    a. Airless paint sprayer
    b. Air paint sprayer with compressor
2. Select type (oil or Latex) and color of paint
3. Mix paint according to directions
4. Fill sprayer
5. Don respirator and protective clothing
6. Paint buildings using ladder as needed
7. Clean sprayer
8. Store sprayer

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 7. Repair Roofs (Small Leaks)

****

Performance Objective: Given the materials listed below, repair small leaks in roofs.

Standard: All holes in roof must be repaired so that leaks are stopped.

Materials Needed: Faulty Roof, Roof Tar, Putty Knife, Screwdriver, Ladder, Storage Area, Screen Wire, Water Hose.

Enabling Objectives: Know how to use basic hand tools.

Performance Guide:

1. Identify roof to be repaired
2. Inspect for water leaks inside poultry house
3. Identify roof areas to be repaired
4. Collect ladder and supplies (roofing tar, putty knife, screwdriver, and screen wire)
5. Set the ladder and take tools and supplies to the roof
6. Repair holes using screen wire and roofing tar
7. Check repair using water
8. Repeat Steps 6 and 7 until all repairs have been made
9. Return supplies, tools, and ladder to storage

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 8. Tighten Doors

****

Performance Objective: Given materials listed below, tighten doors.

Standard: Loose doors (personnel and drive-in) must be adjusted and tightened to minimize drafts, heat loss, and noise.

Materials Needed: Personnel and Drive-In Doors, Hooks, Screwdriver, Adjustable Wrench, Hammer, Tracks and Latches, Pliers, Weatherstripping.

Enabling Objectives: Know how to use basic hand tools.

Performance Guide:

1. Examine door hinges, latches, tracks, rollers, and hooks
2. Determine where repairs need to be made
3. Tighten screws in hinges and latch on personnel door
4. Adjust rollers and inside hook in drive-in door
5. Re-examine door(s) to insure that adjustments have tightened doors
6. Place weatherstripping around doors if needed
7. Return tools to storage

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 9. Clean Air Inlets

****

Performance Objective: Given materials listed below, clean air inlets.

Standard: Dirt and dust must be removed from air inlets.

Materials Needed: Dirty Air Inlets, Hand Brush, Blower.

Enabling Objectives: Know how to operate blower.

Performance Guide:

1. Assemble cleaning aids (blower and hand brush)
2. Identify air inlets to be cleaned
3. Loosen dirt in inlets using hand brush
4. Remove dirt from inlets using blower
5. Inspect air inlets to insure that dirt and dust have been removed
6. Repeat Steps 3 through 5 until all air inlets have been cleaned
7. Store blower and hand brush

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 10. Inspect Buildings for Unwanted Air Filtration

****

Performance Objective: Given materials listed below, inspect buildings for unwanted air filtration.

Standard: Building areas with unwanted air infiltration must be repaired to minimize observable drafts.

Materials Needed: Building to be Inspected, Candle, Match, Insulation, Knife, Hammer, Small Roofing Nails.

Enabling Objectives: Know how to use basic hand tools.

Performance Guide:

1. Identify building to be inspected
2. Locate candle, match, insulation, and tools
3. Check for air drafts around doors, windows, and fans, using lighted candle
4. Repair drafty areas with insulation to minimize air leaks
   a. Estimate size of area causing draft
   b. Cut insulation to fill draft area
   c. Fill draft area with insulation
5. Recheck with candle to determine if draft is closed
6. Repeat Steps 4 and 5 until all drafty areas have been repaired
7. Return tools and supplies to storage area

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 11. Test Alarm System

****

Performance Objective: Given materials listed below, test alarm system.

Standard: The alarm system battery must be in good working condition and must activate a bell, strobe light, telephone or siren when button is pushed.

Materials Needed: Alarm System (bell, strobe light, telephone, siren), Battery Tester (12v), 110 Volt Outlet, Alarm Panel Box, Schedule for Testing Alarm System.

Enabling Objectives: Know how the alarm system operates.
Know basic electrical wiring.

Performance Guide:

1. Determine frequency of test
2. Identify alarm system to be tested
3. Check battery using battery tester
4. Push alarm test button
5. Check if bell rings, strobe light comes on, telephone rings at residence, or siren sounds
6. Unplug alarm charging system
7. Repair alarm system as needed
8. Reset alarm
9. Retest alarm after repairs have been made
10. Plug alarm charging system in 110 volt outlet

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 12. Test Standby Power System

****

Performance Objective: Given the materials listed below, test the standby power system.

Standard: The standby power system must start and carry a regular load when switched from regular power source to standby power.

Materials Needed: Power Source, Standby Power System, Breaker or Manual Power Cutoff Switch, Schedule for Testing Standby Power System.

Enabling Objectives: Know how to operate and maintain standby power system.

Performance Guide:

1. Determine frequency of test
2. Identify standby power system to be tested
3. Turn off power, using breaker or manual power cutoff switch
4. Insure that standby power system starts and carries the load
5. Stop standby power system
6. Turn on manual breaker switch to power source

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 13. Service All Fuel-Powered Machinery

****

Performance Objective: Given the materials listed below, service all fuel-powered machinery.

Standard: Daily and periodic maintenance must be performed according to machine service manual.

Materials Needed: Tractor, Skid Steer Loader, Rotary Tiller, Lawnmower, Trimmer, Power Sprayer, Standby Power Unit, Maintenance Checklist, Storage Area, Maintenance Log Book, Service Manuals.

Enabling Objectives: Know how to read and interpret service manuals.
Know how to perform basic maintenance.

Performance Guide:

1. Identify machine to be serviced
2. Locate related machine service manual
3. Perform maintenance designated on checklist, including one or all of the following:
    a. Fuel level
    b. Oil check
    c. Air filters
    d. Tire pressure
    e. Battery
    f. Coolant level
    g. Engine oil change
    h. Lubrication
4. Return machine to storage area
5. File maintenance log records

DUTY: E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

TASK: 14. Maintain In-House Equipment

****

Performance Objective: Given the materials listed below, maintain in-house equipment.

Standard: In-house equipment must be maintained according to maintenance procedures and schedules recommended in equipment service manual.

Materials Needed: Electric Motors, Straight Edge, Chain or Belt Driven Feeder or Direct Drive Feeders, Feeder Mechanism, Conveyor System for Eggs, In-House Manure Removal System, Equipment and Electric Motor Service Manuals.

Enabling Objectives: Know the basics of electric motors.
Know how to read and interpret service manual.

Performance Guide:

Electric Motors

1. Turn motor off
2. Check bearings by hand rotating motor, looking for smoothness and freeness of movement
3. If check of bearings is satisfactory, clean outside of motor to insure free, clean air flow
4. If check reveals worn, non-servicable bearings, replace motor

In-House Manure Removal System; Conveyor System for Eggs; Chain or Belt Driven Feeder and Feeder Mechanism

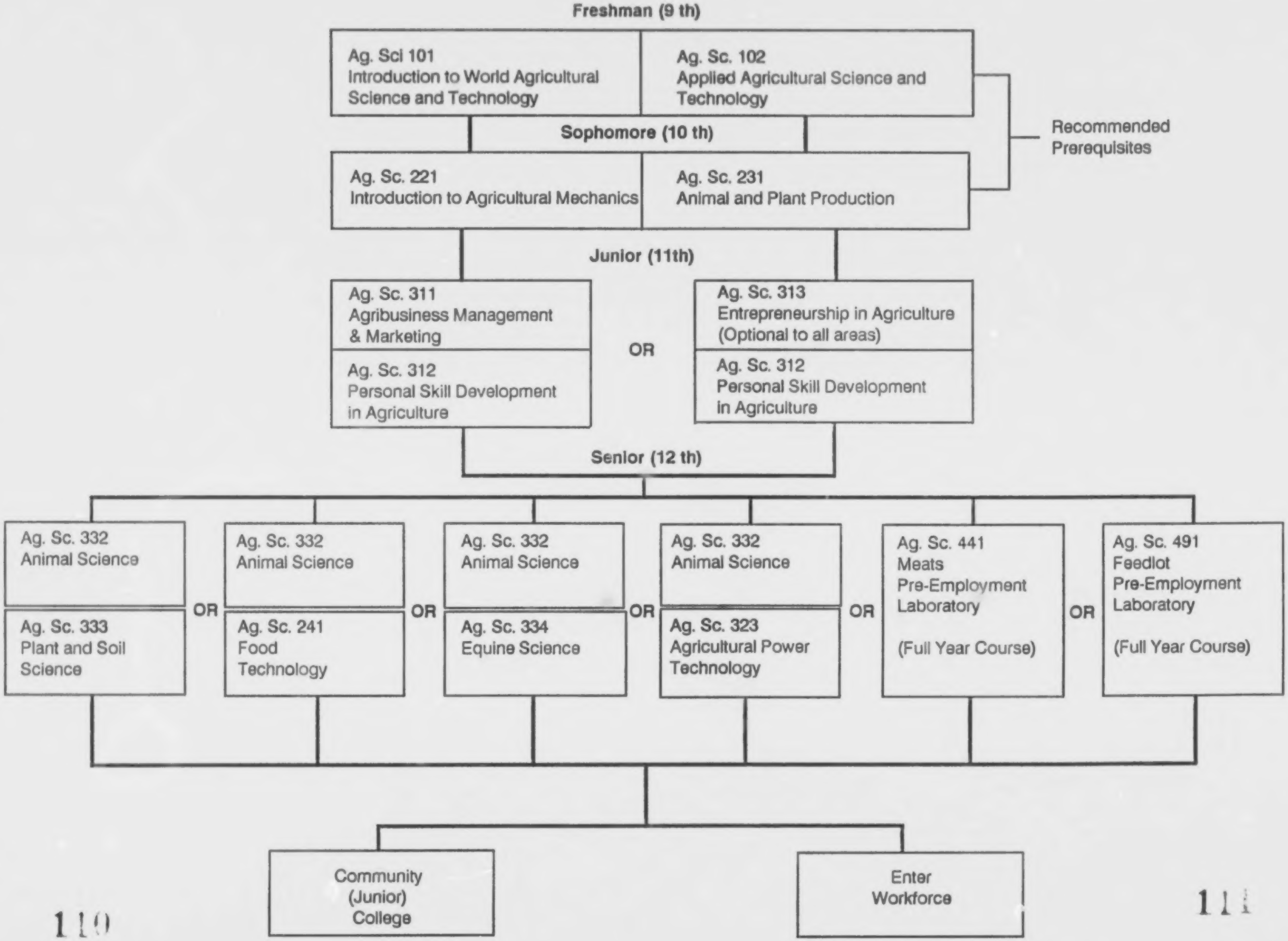
1. Refer to service manual for prescribed maintenance procedures
2. Check alignment of power transfer (chain or belt)
3. Adjust alignment of motor to feeder as needed using straight edge (refer to service manual)
4. Adjust tension of power transfer mechanism according to service manual
5. Replace worn belts or chain links as needed
6. Adjust tension of feeder according to service manual
7. Lubricate equipment according to service manual

V. RECOMMENDED SECONDARY AND POSTSECONDARY COURSE OPTIONS FLOWCHART

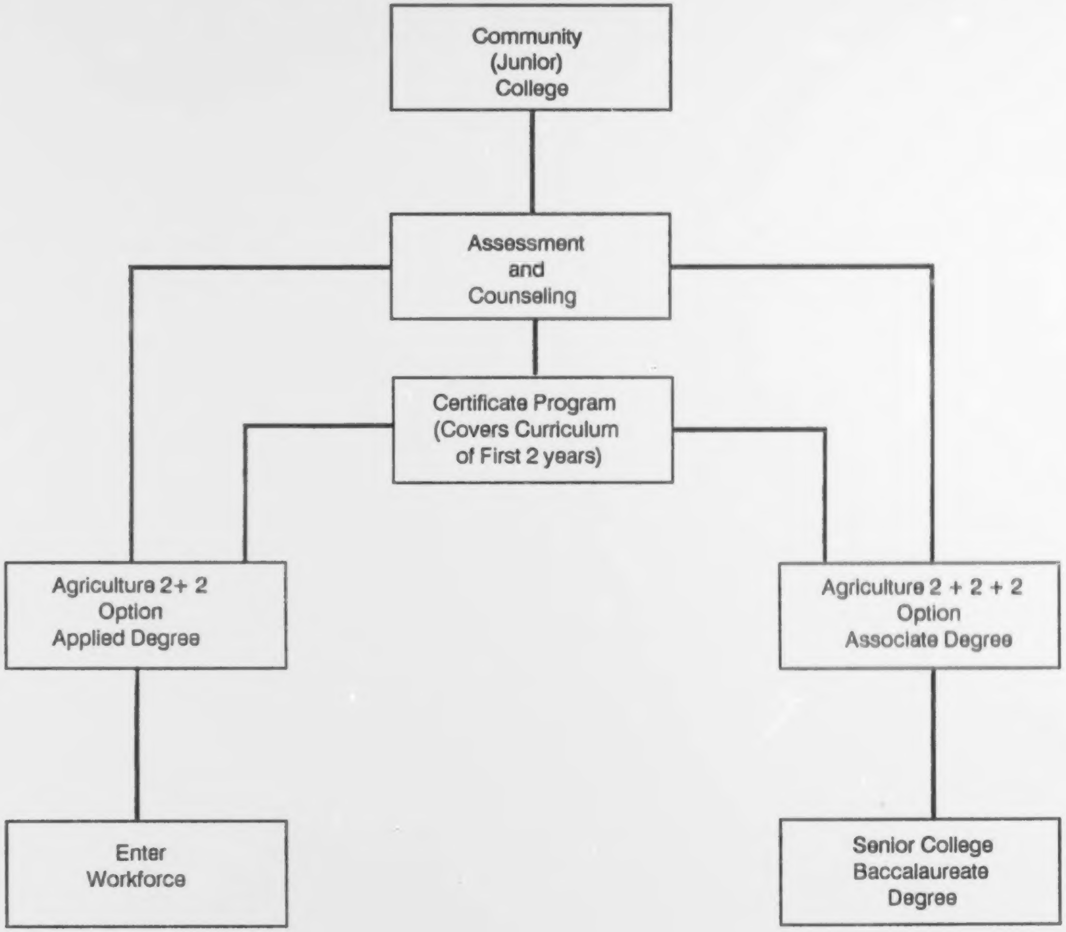
The following flowcharts show the possible courses and routes that a student may take in pursuing a particular 2+2 +2 articulated program.

These charts are examples to be used by other secondary and postsecondary institutions in establishing their own agricultural 2+2 +2 curriculum.

Agriculture 2 + 2 + 2
Animal Science Option


Freshman (9 th)
Ag. Sci 101
Introduction to World Agricultural Science and Technology
Ag. Sc. 102
Applied Agricultural Science and Technology
Sophomore (10 th)
Ag. Sc. 221
Introduction to Agricultural Mechanics
Ag. Sc. 231
Animal and Plant Production
Recommended Prerequisites
Junior (11th)
Ag. Sc. 311
Agribusiness Management & Marketing
Ag. Sc. 312
Personal Skill Development in Agriculture
OR
Ag. Sc. 313
Entrepreneurship in Agriculture (Optional to all areas)
Ag. Sc. 312
Personal Skill Development in Agriculture
Senior (12 th)
Ag. Sc. 332
Animal Science
Ag. Sc. 333
Plant and Soil Science
OR
Ag. Sc. 332
Animal Science
Ag. Sc. 241
Food Technology
OR
Ag. Sc. 332
Animal Science
Ag. Sc. 334
Equine Science
OR
Ag. Sc. 332
Animal Science
Ag. Sc. 323
Agricultural Power Technology
OR
Ag. Sc. 441
Meats Pre-Employment Laboratory
(Full Year Course)
OR
Ag. Sc. 491
Feedlot Pre-Employment Laboratory
(Full Year Course)
Community (Junior) College
Enter Workforce

Agriculture 2 + 2 + 2
Animal Science Option
Continued


Community (Junior) College
Assessment and Counseling
Certificate Program (Covers Curriculum of First 2 years)
Agriculture 2+ 2 Option Applied Degree
Agriculture 2 + 2 + 2 Option Associate Degree
Enter Workforce
Senior College Baccalaureate Degree

VI. RECOMMENDED STUDENT PREREQUISITES

Secondary:

The following secondary plans include both the academic and agricultural recommendations for a student who is interested in pursuing an articulated 2+2+2 agricultural program.

Included are the recommended courses beginning with the freshman year and continuing through grade 12. Students on the regular, advanced, or honors tract may follow this plan; however, students on the regular tract must take some higher math and science courses than may be recommended otherwise.

These plans are based upon a seven period day and the only difference in the three is in the area of Physical Education since choosing one of these three options may affect the courses you would have time to take otherwise.

Postsecondary:

These postsecondary plans include both the academic and agricultural course recommendations for the associate degree or the applied degree for a student who is interested in continuing the 2+2 +2 agricultural program.

ARTICULATED CURRICULA FOR AGRISCIENCE TECHNOLOGY

Daingerfield High School Animal Technology Option (Poultry)

	HIGH SCHOOL			
SUBJECT	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
English	English I Regular or Honors *1	English II Regular or Honors *1	English III Regular or Honors *1	English IV Regular or Honors *1
Mathematics	Algebra I	Geometry	Algebra II	Pre-Calculus Honors *1
Science	Biology I	Physical Science	Chemistry I Regular or Honors *1	
Social Studies	United States History Reg. or Honors *1	World Geography	World History	U.S. Govt. & Free Enterprise
Physical Education	Physical Education / Health	Physical Education		
Agriculture Core	Ag. Sc. 101 Ag. Sc. 102			
Agriculture Core		Ag. Sc. 221 Ag. Sc. 231	Ag. Sc. 222 Optional	
Agriculture Specialty			Ag. Sc. 311 Ag. Sc. 312	Ag. Sc. 321 Ag. Sc. 323
Agriculture Specialty				Ag. Sc. 332 Ag. Sc. 241
Elective	F. A. or Rec. Elective *3	F. A. or Rec. Elective *3	Recommended Elective *4	
Elective			Recommended Elective *4	Computer Elective *2

*1. Students enrolled in the honors program would need to take at least 5 of these courses

*2. Computer course can be selected from the following:
Computer Math
Business Information Processing

*3. Fine Arts Elective can be selected from the following:
(1 credit required for honors and advanced)

Theatre Arts
Introductory Speech
Music History & Literature
Band I-IV (Fall counts for P.E. credit, Spring counts as Fine Arts credit)

*4. Recommended Electives can be selected from the following:

Journalism
Advanced Journalism

Spanish I (Students in honors need to take these
Spanish II *1 courses but regular students may also)

Personal Business Management
Typing I
Record Keeping
Accounting
Advanced Accounting
Introduction to Computer Programming
Psychology
Sociology

ARTICULATED CURRICULA FOR AGRISCIENCE TECHNOLOGY

Daingerfield High School Animal Technology Option (Poultry)

	HIGH SCHOOL			
SUBJECT	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
English	English I Regular or Honors *1	English II Regular or Honors *1	English III Regular or Honors *1	English IV Regular or Honors *1
Mathematics	Algebra I	Geometry	Algebra II	Pre-Calculus Honors *1
Science	Biology I	Physical Science	Chemistry I Regular or Honors *1	
Social Studies	United States History Reg. or Honors *1	World Geography	World History	U.S. Govt. & Free Enterprise
Physical Education	Band I	Band II	Band III	Band IV
Agriculture Core	Ag. Sc. 101 Ag. Sc. 102			
Agriculture Core		Ag. Sc. 221 Ag. Sc. 231	Ag. Sc. 222 Optional	
Agriculture Specialty			Ag. Sc. 311 Ag. Sc. 312	Ag. Sc. 321 Ag. Sc. 323
Agriculture Specialty				Ag. Sc. 332 Ag. Sc. 241
Elective	F. A. or Rec. Elective *3	F. A. or Rec. Elective *3	Recommended Elective *4	
Elective	Health		Computer Elective *2	

*1. Students enrolled in the honors program would need to take at least 5 of these courses

*2. Computer course can be selected from the following:
Computer Math
Business Information Processing

*3. Fine Arts Elective can be selected from the following:
(1 credit required for honors and advanced)

Theatre Arts
Introductory Speech
Music History & Literature
Band I-IV (Fall counts for P.E. credit, Spring counts as Fine Arts credit)

*4. Recommended Electives can be selected from the following:

Journalism
Advanced Journalism

Spanish I (Students in honors need to take these
Spanish II *1 courses but regular students may also)

Personal Business Management
Typing I
Record Keeping
Accounting
Advanced Accounting
Introduction to Computer Programming
Psychology
Sociology

ARTICULATED CURRICULA FOR AGRISCIENCE TECHNOLOGY

Daingerfield High School Animal Technology Option (Poultry)

	HIGH SCHOOL			
SUBJECT	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
English	English I Regular or Honors *1	English II Regular or Honors *1	English III Regular or Honors *1	English IV Regular or Honors *1
Mathematics	Algebra I	Geometry	Algebra II	Pre-Calculus Honors *1
Science	Biology I	Physical Science	Chemistry I Regular or Honors *1	
Social Studies	United States History Reg. or Honors *1	World Geography	World History	U.S. Govt. & Free Enterprise
Physical Education	Athletics	Athletics	Athletics	Athletics
Agriculture Core	Ag. Sc. 101 Ag. Sc. 102			
Agriculture Core		Ag. Sc. 221 Ag. Sc. 231	Ag. Sc. 222 Optional	
Agriculture Specialty			Ag. Sc. 311 Ag. Sc. 312	Ag. Sc. 321 Ag. Sc. 323
Agriculture Specialty				Ag. Sc. 332 Ag. Sc. 241
Elective	F. A. or Rec. Elective *3	F. A. or Rec. Elective *3	Recommended Elective *4	
Elective	Health		Computer Elective *2	

*1. Students enrolled in the honors program would need to take at least 5 of these courses

*2. Computer course can be selected from the following:
Computer Math
Business Information Processing

*3. Fine Arts Elective can be selected from the following:
(1 credit required for honors and advanced)

Theatre Arts
Introductory Speech
Music History & Literature
Band I-IV (Fall counts for P.E. credit, Spring counts as Fine Arts credit)

*4. Recommended Electives can be selected from the following:

Journalism
Advanced Journalism

Spanish I (Students in honors need to take these
Spanish II *1 courses but regular students may also)

Personal Business Management
Typing I
Record Keeping
Accounting
Advanced Accounting
Introduction to Computer Programming
Psychology
Sociology

ARTICULATED CURRICULA FOR AGRISCIENCE TECHNOLOGY

Northeast Texas Community College Animal Technology Option - Associate of Science (Poultry Option)

	POSTSECONDARY			
SUBJECT	FRESHMAN A	FRESHMAN B	SOPHOMORE A	SOPHOMORE B
English	ENGL 1301 3	ENGL 1302 3	ENGL Lit. Elec. 3	SPCH 1301 3
Mathematics	MATH 1311 3			
Science	BIOL 1401 4	BIOL 1402 4		
Science		CHEM 1406 4	CHEM 1407 4	
Social Studies	HIST 1301 3	HIST 1302 3	GOVT 2301 3	GOVT 2302 3
Physical Education			HPER 1	HPER 1
Agriculture Core	AGRI 2373 3		AGRI 2340 3	AGRI 1443 3
Agriculture Specialty			AGRI 1350 3	Food 2400 4
Agriculture Specialty				
Elective		COMP 1301 3		Hum. Elect. 3
Total Hours	16	17	17	17

Basics

ENGL 1301 - English Composition I
ENGL 1302 - English Composition II
ENGL 2311, 2312, 2314, or 2315 Literature
SPCH 1301 - Fundamentals of Speech
MATH 1311 - *College Algebra*
CHEM 1406 - General Chemistry I
CHEM 1407 - General Chemistry II
COMP 1301 - Introduction to Computer Science
BIOL 1401 - General Biology (Botany)
BIOL 1402 - General Biology (Zoology)
HIST 1301 - History of the United States to 1877
HIST 1302 - History of the United States since 1877
GOVT 2301 - American National Government
GOVT 2302 - State and Local Government
HPER - Physical Education Activity
Humanities 1301 - Introduction to Humanities

Agriculture Course Offerings

AGRI 1350 - Computers in Agriculture
AGRI 1443 - Agricultural Economics
AGRI 2340 - Marketing of Agricultural Products
AGRI 2373 - Poultry Science
FOOD 2400 - Introductory Food Science

Additional Courses Recommended If Time Allows:

FOOD 2313 Technology of Food Processing

ARTICULATED CURRICULA FOR AGRISCIENCE TECHNOLOGY

Northeast Texas Community College Animal Technology Option - Associate of Applied Science (Poultry Option)

	POSTSECONDARY			
SUBJECT	FRESHMAN A	FRESHMAN B	SOPHOMORE A	SOPHOMORE B
English	ENGL 1301 3	SPCH 1301 3		
Mathematics		MATH 1305 3		BUAD 1301 3
Science	BIOL 1401 4	BIOL 1402 4		
Social Studies	HIST 1301 3			
Agriculture Core		AGRI 1303 3	AGRI 1304 3	
Agriculture Core	Food 2400 4	AGRI 2406 4	Food 2312 3	
Agriculture Core			Food 2313 3	AGRI 2483 4
Agriculture Specialty			AGRI 1350 3	AGRI 2308 4
Agriculture Specialty			AGRI 2373 3	AGRI 1443 3
Elective	COMP 1301 3		AGRI 1350 3	Hum. Elect. 3
Total Hours	17	17	18	17

Basics

ENGL 1301 - English Composition I
SPCH 1301 - Fundamentals of Speech
MATH 1305 - Intermediate Algebra
BUAD 1301 - Introduction to Business
BIOL 1401 - General Biology (Botany)
BIOL 1402 - General Biology (Zoology)
HIST 1301 - History of the United States to 1877
COMP 1301 - Introduction to Computer Science
Humanities 1301 - Introduction to Humanities

Agriculture Course Offerings

AGRI 1303 - Animal Nutrition and Feeding
AGRI 1304 - Animal and Poultry Health Management
AGRI 1350 - Computers in Agriculture
AGRI 1443 - Agricultural Economics
AGRI 2308 - Cooperative Education
AGRI 2340 - Marketing of Agricultural Products
AGRI 2373 - Poultry Science
AGRI 2406 - Principles of Genetics
AGRI 2483 - Reproductive Physiology
Food 2312 - Food Quality and Sanitation
Food 2313 - Technology of Food Processing
Food 2400 - Introductory Food Science

VII. BASIC COURSE OUTLINES

This section includes the basic course outlines for the agriscience courses to be taught at the secondary level and the course outlines for the postsecondary level agriculture courses.

Although this is a 2+2 +2 articulated curriculum, we have included in this section the basic course outlines for the recommended prerequisites also.

SECONDARY COURSE OUTLINES

Agriscience 101- Introduction to World Agricultural Science and Technology

A. Recognize the Importance of Agriculture in the World

1. Understand Supply and Demand of Food and Fiber
2. Identify the Availability of Renewable and Nonrenewable Agricultural Resources
3. Understand the Impact of Agriculture on the World Economy
4. Describe the Interdependency of Agriculture and Other Segments of Society

B. Explain the Historical Significance of Agriculture

1. Identify Key Developments Shaping Modern Agriculture in the World
2. Identify Key Developments Shaping Modern Agriculture in the United States

C. Recognize the Interdependency of Agriculture and World Politics

1. Identify Factors Affecting World Trade
2. Recognize the Impact of Agriculture as a Political Tool

D. Recognize the Interdependency of Agriculture and the Environment

1. Identify Environmental Concerns in Agriculture
2. List Methods of Protecting the Environment
3. Recognize the Impact of the Environment on Agriculture

E. Explain the Food and Fiber System

1. Explain the Food Chain - from Production to Consumption
2. Explain the Fiber Chain - from Production to Usage

F. Identify Research and Development in Agriculture

1. Understand the Impact of Research and Development and Identify Current Developments in Agricultural Science and Technology
2. Apply Research and Development in the Classroom and Laboratory

G. Explore Career and Other Opportunities in Agriculture

1. Conduct a Career Self-Analysis
2. Recognize the Career Decision-Making Process
3. Develop Job Seeking Skills
4. Identify Full-Time Career Opportunities in Agriculture
5. Identify Part-Time Career Opportunities in Agriculture
6. Identify Avocational Opportunities in Agriculture

H. Develop Personal and Social Skills

1. Develop Professionalism and Ethics
2. Use Proper Etiquette and Behavior
3. Explore Personal Relations
4. Practice Good Grooming and Health Habits

I. Improve Communication Skills

1. Understand the Importance of Effective Communication: Speaking
2. Understand the Importance of Effective Communication: Writing
3. Improve Communication Skills Through Organized Activities
4. Utilize the Media for Effective Communication

J. Develop Leadership Skills in Agricultural Science and Technology Through the FFA

1. Develop Life Skills for Effective Leadership
2. Explore Opportunities for Leadership Development Through the FFA
3. Use Democratic Principles in Conducting Effective Meetings
4. Understand the FFA Organization

K. Examine Personal Financial Management

1. Discuss the Importance and Procedures of Keeping Accurate Records
2. Describe the Importance and Use of Budgeting
3. Describe the Importance and Procedures of Personal Finance

L. Analyze Agricultural Experience Programs

1. Identify Various Types of Supervised Agricultural Experience Programs
2. Describe the Characteristics of Successful Supervised Agricultural Experience Programs
3. Select and Plan Individual Supervised Agricultural Experience Programs

Agriscience 102 - Applied Agricultural Science and Technology

A. Identify Soil Formations

1. Recognize the Importance and Formation of Soils
2. Identify Soil Formations

B. Identify the Nature and Properties of Soils

1. Identify Components and Properties of Soils
2. Recognize Soil Classification Systems

C. Explain Basic Plant Science and Technology

1. Describe Plant Structure and Functions of Plant Parts
2. Discuss Plant Growth and Development: Seed Germination
3. Discuss Plant Growth and Development: Production, Storage, and Use of Food in Plants
4. Outline Plant Genetics
5. Outline Plant Reproduction
6. Discuss Plant Breeding
7. Recognize Plants

D. Explain Basic Animal Science and Technology

1. Explain Animal Growth and Development
2. Describe the Anatomy and Physiology of Animals
3. Identify Breeds and Classes of Livestock and Poultry of Economic Importance to the Community
4. Discuss the Importance of Animal Selection
5. Outline Animal Reproduction
6. Outline Animal Genetics
7. Discuss Animal Breeding

E. Determine Basic Food Science Technology

1. Recognize the Importance of Food Science Technology in the World
2. Determine Trends in World Food Production

F. Explore Agricultural Mechanics

1. Identify Major Areas of Agricultural Mechanics
2. Identify Safety and Laboratory Procedures
3. Perform Basic Skills in Agricultural Construction - Tools
4. Identify Lumber and Compute Bill of Materials
5. Identify and Use Fasteners

G. Recognize the Protection of the Environment

  1. Determine the Effect of Agricultural Chemicals on the Environment
  2. Identify the Requirements for the Proper Use of Agricultural Chemicals
  3. Identify Methods of Protecting the Environment

H. Understand Energy and Water Conservation in Agriculture

  1. Determine Alternative Energy Sources for Agricultural Use
  2. Identify Methods of Conserving Electrical Energy and Combustible Fuels
  3. Explain Methods of Conserving Water

I. Explore Career and Other Opportunities in Applied Agricultural Science and Technology

  1. Conduct a Career Self-Analysis
  2. Identify Career Clusters in Agricultural Science and Technology

J. Understand Experience Programs in Agricultural Science and Technology

  1. Identify the Various Types of Supervised Agricultural Experience Programs
  2. Describe the Characteristics of Successful Supervised Agricultural Experience Programs
  3. Select and Plan Individual Supervised Agricultural Experience Programs

K. Plan and Conduct Leadership Activities in Applied Agricultural Science and Technology

  1. Develop Life Skills for Effective Leadership
  2. Practice Leadership Skills for Agricultural Science and Technology

Agriscience 221 - Introduction to Agricultural Mechanics

A. Understand and Apply Safe Work Practices That Apply to Agricultural Mechanics

1. Determine the Importance of Agricultural Mechanics
2. Understand and Apply Safety Practices
3. Understand and Apply Laboratory Management Procedures

B. Explore Career Opportunities in Agricultural Mechanics

1. Perform a Career Self-Analysis
2. Evaluate Careers in Agricultural Mechanics
3. Assess Career-Decision Making Factors
4. Conduct Supervised Agricultural Experience Programs Related to Agricultural Mechanics

C. Plan and Conduct Leadership Activities Related to Agricultural Mechanics

1. Participate in Leadership Organizations
2. Develop Life Skills for Effective Citizenship
3. Participate in FFA Degree and Award Activities

D. Identify, Select, and Use Hand Tools, Power Tools, and Measuring and Marking Devices

1. Identify and Use Hand Tools
2. Identify and Use Power Tools
3. Select and Use Measuring and Marking Devices

E. Identify and Perform Basic Electric Wiring Skills

1. Identify Basic Principles of Electricity and Understand Basic Electrical Terminology
2. Perform Basic Electric Wiring Skills

F. Perform Basic Plumbing Skills

1. Install Pipe and Plumbing Fixtures
2. Maintain Water System

G. Apply Basic Concrete Principles

1. Estimate Materials Needed
2. Construct Forms
3. Place, Reinforce, Finish, and Cure Concrete

H. Practice Basic Carpentry Skills

1. Identify Building Materials
2. Plan Cost Effective Construction
3. Apply Construction Techniques

I. Select and Apply Paints and Preservatives

  1. Select Materials
  2. Apply Brush Painting Techniques
  3. Apply Spray Painting Techniques

J. Identify Fencing Methods

  1. Select Fencing Materials
  2. Plan Fence Construction

K. Perform and Apply Cold Metal Skills

  1. Identify Types of Metals
  2. Cut, File, Shape, and Drill Metal

L. Perform and Apply Hot Metal Skills

  1. Select and Operate Oxy-Fuel Welding and Cutting Equipment
  2. Select and Operate Electric Arc Welding Equipment

Agriscience 222 - Home Maintenance and Improvement

A. Understand and Apply Safe Work Practices That Apply to Home Maintenance and Improvement
   1. Identify Home Safety Needs
   2. Identify Home Hazards

B. Explore Career Opportunities in Home Maintenance and Improvement
   1. Perform a Career Self-Analysis
   2. Evaluate Careers in Home Maintenance and Improvement
   3. Assess Career-Decision Making Factors
   4. Conduct Supervised Agricultural Experience Programs Related to Home Maintenance and Improvement

C. Plan and Conduct Leadership Activities Related to Home Maintenance and Improvement
   1. Participate in Leadership Organizations
   2. Develop Life Skills for Effective Citizenship
   3. Participate in FFA Degree and Award Activities

D. Select and Use Tools, Equipment and Materials
   1. Identify and Use Wood and Metal Working Tools
   2. Organize and Store Tools and Equipment
   3. Select and Use Wood and Metal Fasteners

E. Repair and Maintain Home Plumbing System
   1. Repair Water Fixtures
   2. Repair Water Pipe
   3. Service and Clean Plumbing Systems
   4. Replace Lawn Irrigation Heads and Bubblers
   5. Repair Water Hose Connectors

F. Repair and Maintain Home Electrical System
   1. Understand Electrical Safety
   2. Understand Terminology Related to Electrical Power Consumption
   3. Determine Electrical Loads and Circuit Needs
   4. Determine Lighting Needs and Types of Lighting
   5. Add and Replace Outlets, Switches, and Light Fixtures
   6. Select and Repair Extension Cords
   7. Select and Use Circuit Protection Devices

G. Service and Maintain Home Heating and Cooling Systems
   1. Check for Gas Leaks
   2. Service Filters
   3. Service Electric Motors
   4. Compute Insulation Values
   5. Plan Attic Ventilation
   6. Check the Home for Energy Efficiency
   7. Plan Applications of Solar Heating
   8. Maintain Fireplaces, Wood Heaters, and Chimneys

H. Repair and Maintain Home Interior and Exterior
   1. Determine Square Footage
   2. Calculate Paint Coverage
   3. Prepare Surfaces for Painting
   4. Select Paints and Preservatives
   5. Determine Proper Application and Safe Use of Paints and Preservatives
   6. Locate Studs Within Walls
   7. Repair Sheetrock and Wall Board
   8. Repair Masonry Walls
   9. Replace Trim
   10. Establish a Pest Control Program

I. Adjust and Maintain Doors and Windows
   1. Adjust Door Clearances
   2. Replace Door Latches
   3. Install and Maintain Doors, Windows, and Screens
   4. Understand Home Security Systems
   5. Install Garage Door Openers
   6. Install Weather Stripping

J. Repair and Maintain the Roof
   1. Determine Roof Condition
   2. Estimate Roof Repair Cost
   3. Make Roof Repairs
   4. Install Gutters and Downspouts

K. Estimate Concrete Needs for Porches, Patios, Sidewalks, and Landscaping Structures
   1. Calculate the Water-Cement-Aggregate Ratio
   2. Repair Cracks in Concrete
   3. Understand the Placement and Curing of Concrete
   4. Use Pre-Mixed Concrete
   5. Determine the Most Economical Source of Concrete

L. Service and Maintain Engines and Vehicles
   1. Maintain Engine Fluid Levels
   2. Check Condition and Tension of Belts
   3. Check and Service Air Cleaners
   4. Service Storage Battery
   5. Check and Replace Sparkplugs and Other Ignition Components
   6. Maintain Vehicle Tires
   7. Lubricate Bearings and Joints
   8. Determine Common Causes of Small Engine Failure
   9. Winterize the Small Engine

M. Maintain Household Tools and Equipment
   1. Recondition Edge Tools

Agriscience 231 - Animal and Plant Production

A. Determine the Importance of Soil and Its Influence on Society

1. Determine the Influence of Soil
2. Explain the Formation of Soil

B. Identify the Chemical and Physical Properties of Soil

1. Identify Soil Components
2. Identify Soil Properties
3. Recognize Soil Classification Systems
4. Recognize Methods of Soil Sampling

C. Explain the Conservation of Soil for Future Generations

1. Identify Kinds of Soil Erosion
2. Explain the Factors Influencing Soil Erosion
3. Discuss Soil Erosion Control Measures
4. Examine the Fundamentals of Soil Use and Land Management

D. Explain the Conservation of Soil Water for Future Generations

1. Explain the Importance and Loss of Soil Water
2. Discuss Soil Water Drainage
3. Identify Water Requirements of Crops
4. Explain Soil Water Conservation Measures

E. Recognize Methods for Improving Soil Fertility for Agriculture and Home Use

1. Identify Soil Nutrients
2. Recognize Uses and Types of Fertilizer
3. Explain the Importance of Organic Matter
4. Recognize Soil Deficiencies
5. Identify Secondary Nutrients, Micronutrients, and Soil pH

F. Determine the Importance of Plants and Their Influence on Society

1. Determine the Economic Importance of Major Crops
2. Locate Major Areas of Crop Production in the State, Nation, and World
3. Identify Major Crops and Their Uses

G. Describe Plant Anatomy and Physiology

1. Identify Basic Structures and Functions of Plant Parts
2. Explain Seed Germination in Plants
3. Describe Photosynthesis, Storage, and Use of Food in Plants

H. Explain Plant Reproduction

   1. Explain Sexual Reproduction of Plants
   2. Explain Asexual Reproduction of Plants

I. Recognize Plant Nutrient Requirements

   1. Recognize Nutrient Requirements of Plants
   2. Identify Organic and Inorganic Fertilizers - Types, Sources, and Blends
   3. Discuss Methods, Rates, and Timing of Fertilizer Applications and Fertilizer Regulations

J. Select Fundamental Plant Management Techniques

   1. Select Mechanical Techniques of Plant Management
   2. Select Chemical Techniques of Plant Management

K. Determine the Importance of Animals and Their Influence on Society

   1. Examine Classes, Grades, and Numbers of Livestock in the State, Nation, and World
   2. Determine Trends in Production and Consumption of Animal Products

L. Evaluate and Select Livestock, Poultry, and Rabbits Based on Performance, Visual Appraisal, and Pedigree

   1. Evaluate and Select Beef Cattle
   2. Evaluate and Select Dairy Cattle
   3. Evaluate and Select Swine
   4. Evaluate and Select Horses
   5. Evaluate and Select Sheep
   6. Evaluate and Select Goats
   7. Evaluate and Select Poultry
   8. Evaluate and Select Rabbits

M. Evaluate Livestock and Poultry Carcasses and Identify Wholesale and Retail Cuts

   1. Evaluate Livestock Carcasses and Identify Wholesale and Retail Cuts
   2. Evaluate Poultry Carcasses and Identify Wholesale and Retail Cuts

N. Select Fundamental Animal Management Techniques

1. Select Methods of Safe Handling and Restraining of Domestic Animals
2. Select Methods of Performing Common Surgical and Immunization Skills Used with Domestic Animals
3. Select Methods of Identifying Domestic Animals for Ownership
4. Select Methods of Transporting Domestic Animals

O. Describe the Anatomy and Physiology of Domestic Animals

1. Describe Circulatory Systems of Domestic Animals
2. Describe Respiratory Systems of Domestic Animals
3. Describe Skeletal Systems of Domestic Animals
4. Describe Muscular Systems of Domestic Animals
5. Describe Digestive Systems of Domestic Animals
6. Describe Reproductive Systems of Domestic Animals

P. Recognize Animal Nutrient Requirements

1. Identify Feed Nutrients for Animals
2. Identify Classes of Animal Feeds
3. Identify Feed Additives for Animal Feeds

Q. Manage Records of Soil, Plant, and Animal Related Enterprises

1. Maintain Records of Soil, Plant, and Animal Related Enterprises
2. Analyze Records of Soil, Plant, and Animal Related Enterprises

R. Plan and Conduct Leadership Activities Related to Animal and Plant Production

1. Develop Leadership Skills Related to Animal and Plant Production
2. Participate in Leadership Skills Related to Animal and Plant Production

S. Explore Career Opportunities in Animal and Plant Production

1. Identify Careers in Plant and Soil Science
2. Identify Careers in Animal Science

Agriscience 241 - Food Technology

A. Determine Trends in World Food Production

1. Determine Trends in World Populations
2. Determine Trends in Supply and Demand of Food Products

B. Understand the Nutritive Value of Food Constituents

1. Determine the Nutritive Value of Basic Food Groups
2. Determine the Energy Value and Calorie Levels of Food Constituents

C. Identify Procedures and Government Regulations Involved in Sanitation in the Food Industry

1. Outline Federal and State Inspection Standards for the Food Industry
2. Explain the Control of Insects and Rodents in the Food Industry
3. Discuss the Use of Chemicals for Sanitation in the Food Industry
4. Understand Public Health Regulations

D. Describe Methods of Preparing Livestock Carcasses for the Cooler

1. Explain Methods of Handling Livestock at the Processing Plant
2. Describe Slaughtering Procedures of Beef, Pork, and Lamb

E. Analyze Methods of Inspecting and Grading Meats

1. Identify Methods of Inspecting Beef, Pork, and Lamb Carcasses
2. Analyze USDA Grades of Beef
3. Analyze USDA Grades of Pork
4. Analyze USDA Grades of Lamb

F. Identify Methods of Fabricating Meats

1. Identify the Wholesale and Retail Cuts of Beef
2. Identify the Wholesale and Retail Cuts of Pork
3. Identify the Wholesale and Retail Cuts of Lamb
4. Discuss the Preparation of Various Processed Meats

G. Identify Methods of Processing Poultry

1. Explain the Process of Slaughtering Poultry
2. Analyze USDA Grades and Inspection Procedures of Dressed Poultry
3. Identify the Retail Cuts and Value-Added Products of Poultry

H. Identify Methods of Processing Fish

1. Recognize Various Classes of Fish and Seafood
2. Identify Processes of Washing, Scaling, and Gutting Fish
3. Identify Processes of Skinning, Filleting, and Other Methods of Fabricating Fish
4. Determine the Quality of Fish
5. Recognize Methods of Preparing Specialty Fish and Seafood Items

I. Describe the Methods of Preserving and Storing Meats

1. Explain Methods of Preserving Meat, Poultry, and Fish
2. Discuss Methods of Wrapping, Packaging, and Labeling Meat, Poultry, and Fish
3. Describe Methods of Refrigerating and Freezing Meat, Poultry, and Fish

J. Discuss the Processing of By-Products of the Meat Industry

1. Discuss the Fabrication of Edible By-Products of Livestock, Poultry, and Fish
2. Identify Inedible By-Products of the Meat Industry

K. Explain the Preparation of Eggs for Market

1. Explain the Storing and Handling of Eggs
2. Grade Exterior, Interior, and Broken-out Eggs
3. Explain the Processing, Packaging, and Marketing of Eggs

L. Describe the Processing, Packaging, and Quality Testing of Milk and Dairy Products for Distribution

1. Explain the Procedures in Sampling, Collecting, Transporting, Receiving, and Storing Raw Milk
2. Describe the Methods of Cleaning and Sanitizing Dairy Equipment and Containers
3. Determine Milk Quality
4. Describe the Processes of Clarification, Filtration, Separation, and Standardization of Milk
5. Describe the Processes of Pasteurization, Vacuumization, Homogenization, and Refrigeration of Milk
6. Describe the Processes of Packaging, Labeling, Dating, and Distributing Milk and Other Dairy Products

M. Describe the Processing of Other Dairy Products

1. Describe the Process of Making Cultured and Acidified Milk Products
2. Describe the Process of Cheese Manufacturing
3. Classify and Grade Cheeses
4. Discuss the Processes Involved in the Preparation of Frozen Deserts from Milk
5. Discuss the Process of Making Butter
6. Identify Procedures Involved in the Preparation of Concentrated and Dried Milk Products

N. Compare the Methods of Processing Various Forms of Fruits, Nuts, and Vegetables

1. Explain the Transporting, Receiving, and Storing of Fruits, Vegetables, and Nuts
2. Describe the Classifying and Grading of Fruits and Vegetables
3. Explain the Washing and Trimming of Fruits and Vegetables
4. Describe the Peeling, Cutting, and Blanching of Fruits and Vegetables
5. Discuss the Mechanical and Chemical Preservation of Fruits and Vegetables
6. Describe the Grading and Shelling of Nuts
7. Compare the Packaging, Freezing, and Storing of Fruits, Vegetables, and Nuts

O. Recognize the Procedures Involved in the Marketing of Food Products

1. Identify Wholesale and Retail Markets and Marketing Procedures for Food Products
2. Recognize Methods of Pricing and Labeling Various Food Products
3. Prepare and Maintain Displays of Food Products
4. Discuss Methods of Monitoring Quality and Minimizing Waste of Various Perishable Food Products
5. Explain Methods of Maintaining Stocking Levels of Food Products
6. Explore the Role of Convenience Foods in Consumer Preference

P. Explore Career Opportunities in Food Science Technology

1. Conduct a Career Self-Analysis
2. Identify Career Opportunities in Food Science Technology

Q. Plan and Conduct Leadership Activities Related to Food Technology

1. Develop Life Skills for Effective Leadership
2. Practice Leadership Skills for Food Science Technology

R. Manage Records in the Food Science Industry

1. Maintain Records in the Food Science Industry
2. Analyze Records in the Food Science Industry

Agriscience 311- Agribusiness Management and Marketing

A. Examine Agribusiness Management and its Importance

1. Recognize the Importance of Agriculture
2. Describe the Role and Functions of the Manager
3. Investigate the Process of Management Decision Making
4. Discuss the Value of Setting Goals and Objectives

B. Identify Economic Principles Important to Agribusiness Management

1. Discuss Free Enterprise and Economic Systems
2. Examine Consumer Economics: Supply and Demand
3. Examine Producer Economics: Maximizing Profits

C. Illustrate the Use of Budgeting in Decision Making

1. Categorize Income and Cost of Production
2. Examine the Construction and Analysis of Enterprise Budgets
3. Discuss the Use of Whole Farm Budgeting for Planning
4. Investigate the Use of Partial Budgeting to Analyze Proposed Business Changes

D. Analyze Recordkeeping Procedures

1. List the Parts of a Management Information System
2. Compare Accounting Methods
3. Select an Accounting System
4. Prepare Financial Statements: Balance Sheet, Income Statement, and Cash Flow Statement
5. Analyze the Financial Strength of the Business
6. Review Tax Records and Returns
7. Identify Important Production Records
8. Evaluate Production Records

E. Discuss the Acquisition of Capital Resources

1. Compare Methods of Obtaining Capital Resources
2. Identify the Importance and Types of Credit
3. Determine the Institutions that Provide Agricultural Loans
4. Review Loan Application Forms
5. Compare Methods of Computing Interest
6. Compare Types of Loans

F. Explain Business Related Laws

1. Compare Business Types
2. Interpret Common Agricultural Laws
3. Examine Important Government Regulations
4. Review Common Legal Documents

G. Review Methods of Reducing Risk

   1. Identify Risk Management Techniques
   2. Identify Types of Insurance Available
   3. Discuss Sources of Insurance

H. Examine Government Policy Toward Agriculture

   1. Review Past Agricultural Policies
   2. Discuss Recent and Future Government Policies Toward Agriculture

I. Study the Marketing of Agricultural Products

   1. Discuss the Purpose and Importance of Marketing
   2. Discuss the Competitive Environment
   3. Discuss Factors that Influence Market Decisions: Foreign and Domestic
   4. Compare Types of Agricultural Markets
   5. Identify Marketing Alternatives for Production Agriculture
   6. Discuss Forward Contracting: Cash and Futures
   7. Review the Effects of Government Programs and Regulations

J. Examine the Application of Computers to Agribusiness Management

   1. Discuss Appropriate Uses for Computers
   2. Utilize Decision Aid Software
   3. Utilize Computerized Recordkeeping Systems
   4. Identify Guidelines for Selecting a Suitable Computer System

K. Describe the Management of Human Resources

   1. Analyze Employee Benefits
   2. Describe the Employer/Employee Relationship

L. Explore Career Opportunities in Agribusiness Management

Agriscience 312 - Personal Skill Development in Agriculture

A. Discuss Personal Development

1. Develop a Positive Self Concept
2. Develop Social Skills
3. Project a Professional Image

B. Describe an Effective Leader

1. Determine the Traits of a Good Leader
2. Contrast Leadership Styles

C. Develop Leadership Ability

1. Realize Personal Leadership Potential
2. Understand Basic Human Needs
3. Motivating and Influence People
4. Prepare Resumes and Applications

D. Describe Employee Responsibilities

1. Prepare for Job Interviews
2. Describe Employer Expectations
3. Recognize the Importance of Work Related Ethics
4. Get Along with Co-Workers

E. Describe Employer Responsibilities

1. Evaluate Job Applicants
2. Evaluate Employee Performance
3. Develop an Effective Complaint and Appeals Procedure
4. Recognize Employer Responsibilities
5. Recognize the Importance of Business Related Ethics

F. Develop Communications with Groups and Individuals

1. Improve Written Communications
2. Improve Verbal Communications
3. Improve Non-Verbal Communications
4. Participate in Group Discussions
5. Conduct a Successful Meeting
6. Work with Diverse Groups
7. Remove Barriers to Communication
8. Listen Effectively
9. Make Friends

G. Demonstrate Group and Individual Efficiency

1. Develop a Program of Work
2. Organize Groups
3. Establish Personal Goals
4. Manage Time
5. Make Decisions
6. Solve Problems

Agriscience 321 - Agricultural Structures Technology

A. Understand and Apply Safe Work Practices That Apply to Agricultural Structures Technology

1. Determine the Importance of Agricultural Structures Technology
2. Reinforce Basic Technical Skills
3. Identify Safety Practices
4. Identify Laboratory Management Procedures

B. Explore Career Opportunities in Agricultural Structures Technology

1. Perform a Career Self-Analysis
2. Evaluate Careers in Agricultural Structures Technology
3. Assess Career-Decision Making Skills
4. Identify and Conduct Supervised Agricultural Experience Programs Related to Agricultural Structures Technology

C. Plan and Conduct Leadership Activities Related to Agricultural Structures Technology

1. Participate in Leadership Organizations
2. Develop Life Skills for Effective Citizenship
3. Participate in FFA Degree and Award Activities

D. Plan and Construct Agricultural Buildings

1. Select Buildings by Type of Construction and Identify Structural Parts
2. Locate Buildings for Efficiency and Safety
3. Select Equipment for Ventilation, Environmental Control, Waste Handling, and Materials Handling
4. Utilize Computer Assisted Design Techniques in Planning
5. Read Plans or Working Drawings and Plan for Cost Effectiveness
6. Plan Footings, Foundations, and Floors
7. Select and Install Framing, Doors, Windows, Sheeting, Roofing, and Insulation Materials
8. Select and Apply Paints and Preservatives

E. Plan and Construct Agricultural Enclosures

1. Plan Location and Arrangements of Fences and Corrals
2. Select Types and Quality of Fencing Materials
3. Select Electric and Solar Fence Controls and Components
4. Select Types of End and Corner Construction
5. Determine Number and Type of Line Posts
6. Construct Fences and Corrals

F. Install, Service, and Maintain Electrical Systems

1. Reinforce Basic Principles and Terms of Electricity
2. Reinforce Safe Use of Electricity
3. Determine Electrical Needs and Loads
4. Plan Electrical Installations
5. Use the National Electric Code and Local Codes
6. Select Wiring Materials and Supplies
7. Perform Circuit Wiring Operations
8. Make Minor Electrical Repairs and Changes in Electrical Systems

G. Place, Finish, and Cure Concrete Slabs and Structures

1. Plan for Site Preparation and Form Construction
2. Proportion, Reinforce, Place and Finish Concrete
3. Plan Tilt-up Construction
4. Use Masonry Construction

H. Recognize Non-Traditional Structural Building Techniques

1. Evaluate Passive Energy Storage Structures
2. Evaluate Non-Traditional Construction

I. Select and Use Surveying Equipment

1. Level for Grades, Building Layouts, Profiles, and Excavations

J. Plan, Establish, and Maintain Water Management Systems

1. Plan Agricultural Water Systems
2. Install and Maintain Piping Systems
3. Plan, Install, and Maintain Irrigation Systems

Agriscience 323 - Agricultural Power Technology

A. Understand and Apply Safe Work Practices That Apply to Agricultural Power Technology

1. Determine the Importance of Agricultural Power Technology
2. Reinforce Basic Technical Skills
3. Identify Safety Procedures
4. Identify Laboratory Management Procedures

B. Explore Career Opportunities in Agricultural Power Technology

1. Perform a Career Self-Analysis
2. Evaluate Careers in Agricultural Power Technology
3. Assess Career-Decision Making Factors
4. Conduct Supervised Agricultural Experience Programs Related to Agricultural Power Technology

C. Plan and Conduct Leadership Activities Related to Agricultural Power Technology

1. Participate in Leadership Organizations
2. Develop Life Skills for Effective Citizenship
3. Participate in FFA Degree and Award Activities

D. Utilize Tools, Equipment and Facilities

1. Identify and Select Tools an Equipment
2. Maintain and Operate Tools and Equipment
3. Plan, Utilize and Maintain Service Centers

E. Select, Operate, and Maintain Agricultural Machines and Equipment

1. Identify and Select Machines and Equipment
2. Identify and Maintain Component Materials
3. Identify, Select, and Use Fasteners
4. Identify and Service Monitoring, Sensing, and Metering Devices
5. Adjust, Calibrate, Maintain, and Operate Equipment

F. Select, Operate, and Maintain Small Air Cooled Engines

1. Select Small Air Cooled Engines
2. Understand Principles of Two-Stroke and Four-Stroke Cycle Internal Combustion Engines
3. Maintain and Trouble Shoot Small Air Cooled Engines
4. Disassemble and Reassemble Small Air Cooled Engines

G. Select, Operate, and Maintain Tractors

1. Select and Operate Tractors
2. Maintain Air Intake and Exhaust Systems
3. Maintain Lubrication Systems and Select Lubricants
4. Maintain Fuel Systems, Select, Store, and Handle Fuel
5. Maintain DC Electrical Systems
6. Maintain Power Trains
7. Maintain Hydraulic Systems
8. Maintain Steering and Braking Systems
9. Maintain Air Conditioning Systems
10. Select and Maintain Tires, Ballast, and Weight Transfer

H. Select and Maintain Electric Motors

1. Select and Operate Electric Motors
2. Select and Install Controls and Protective Devices
3. Maintain and Trouble Shoot Electric Motors

I. Select and Maintain Hydraulic Motors

1. Select and Operate Hydraulic Motors
2. Maintain Hydraulic Motors and Pumps

Agriscience 332 - Animal Science

A. Identify the Importance of Animal Health, Reproduction, Nutrition and Management to Animal Production

1. Identify the Impact of Health, Reproduction, Nutrition, and Management on Animal Reproduction
2. Compare and Contrast the Impact of Health, Reproduction, Nutrition, and Management on Major Breeds and Classes of Livestock

B. Analyze Animal Anatomy and Physiology Affected by Health, Reproduction, Nutrition and Management

1. Analyze the External Anatomy of Domestic Animals
2. Analyze the Digestive System of Domestic Animals
3. Analyze the Circulatory System of Domestic Animals
4. Analyze the Respiratory System of Domestic Animals
5. Analyze the Nervous System of Domestic Animals
6. Analyze the Reproductive System of Domestic Animals
7. Identify Normal Animal Behavior and Vital Life Signs

C. Explain Animal Genetics and Reproduction

1. Explain the Use of Genetics in the Production and Improvement of Domestic Animals
2. Analyze the Role of Reproductive Physiology in the Production, Growth, and Development of Breeding Animals
3. Explain Various Breeding Systems of Breeding Animals
4. Discuss Methods of Breeding Various Classes of Domestic Animals
5. Explain the Use of Artificial Insemination with Domestic Animals
6. Discuss the Use of Embryo Transfer in Domestic Animals
7. Discuss Pregnancy Diagnosis in Domestic Animals
8. Explain the Care of Domestic Animals During Pregnancy and at Parturition

D. Evaluate and Select Breeding Animals Based on Performance Testing, Production Records, Progeny Testing, and Visual Appraisal

1. Evaluate and Select Beef Cattle
2. Evaluate and Select Dairy Cattle
3. Evaluate and Select Swine
4. Evaluate and Select Sheep and Goats
5. Evaluate and Select Poultry

E. Analyze Breeding Merit of Domestic Animals Based on Carcass Evaluation

1. Evaluate and Grade Beef, Swine, and Sheep Carcasses
2. Relate Carcass Merit to Fabrication of Beef, Pork, and Lamb Wholesale and Retail Cuts
3. Evaluate and Grade Poultry Carcasses

F. Determine Nutritional Requirements of Domestic Animals

1. Analyze the Physiology of Animal Digestion
2. Determine Nutritional Requirements of Ruminant and Non-Ruminant Domestic Animals
3. Identify Sources of Nutrients for Domestic Animals
4. Identify Uses of Vitamins, Minerals, and Other Feed Additives for Domestic Animals
5. Formulate Rations for Various Classes of Domestic Animals
6. Analyze the Quality of Commercially Prepared Feeds
7. Discuss Feeding Practices for Various Classes of Domestic Animals

G. Identify Domestic Animal Diseases, Causes, and Treatments

1. Examine the Role of Bacteria, Funguses, Viruses, Genetics, and Nutrition in Causing Diseases
2. Identify Methods of Controlling and/or Preventing Diseases
3. Identify Common Domestic Animal Diseases and Recognize Methods of Treatment
4. Identify Infestations and Recognize Methods of Controlling Internal and External Parasites in Domestic Animals
5. Identify the Use of Pharmaceuticals for Immunization and Other Means of Preserving or Improving Animal Health
6. Recognize Methods of Maintaining Livestock Efficiency and Safety Using Common Surgical and Injection Procedures

H. Recognize Domestic Animal Management Techniques

1. Analyze Methods of Developing Productive Breeding Animals
2. Design Efficient Livestock Facilities
3. Select Efficient Equipment to Nurture, Handle, and Restrain Domestic Animals Safely
4. Analyze Efficient Methods of Transporting Domestic Animals
5. Explain Domestic Animal Identification, Classification, Certification, and Registration Systems
6. Identify Legal Aspects of Animal Protection and Production
7. Explore Research in Animal Technology

I. Use Record Keeping in Animal Science

1. Maintain Production, Performance, Progeny, and Health Records
2. Analyze Records for Improved Animal Production

J. Explore Career Opportunities in Animal Science

1. Identify Career Opportunities in Animal Production
2. Identify Career Opportunities in Animal Health

K. Plan and Conduct Leadership Activities Related to Animal Science

1. Develop Leadership Skills Related to Animal Science
2. Participate in Leadership Activities Related to Animal Science

POSTSECONDARY COURSE OUTLINES

AGRICULTURE 2 + 2 + 2
Poultry Products Management Option
Northeast Texas Community College

Agriculture 2 + 2 Option
Applied Degree

- AGRI 1303 Animal Nutrition & Feeding
- AGRI 1304 Animal & Poultry Health Management
- *AGRI 1350 Computers in Agriculture
- AGRI 1443 Agricultural Economics
- AGRI 2308 Cooperative Education
- *AGRI 2340 Marketing of Ag. Products
- AGRI 2373 Poultry Science
- AGRI 2406 Genetics
- AGRI 2483 Reproductive Physiology
- FOOD 2312 Food Quality & Sanitation
- FOOD 2313 Technology of Food Processing
- FOOD 2400 Introductory Food Science

Certificate Program
(Covers Curriculum of First Two Years)

- AGRI 1101 *The Agricultural Industry
- AGRI 1313 Agricultural Mechanics
- AGRI 1414 General Agronomy
- AGRI 1484 Introduction to Animal Science
- AGRI 2386 Farm Buildings

Agriculture 2 + 2 + 2 Option
Associate Degree

- *AGRI 1350 Computers in Agriculture
- AGRI 1443 Agricultural Economics
- *AGRI 2340 Marketing of Ag. Products
- AGRI 2373 Poultry Science
- FOOD 2400 Introductory Food Science

Students who do not enter the 2+2 program until after graduation from high school must complete the certificate program before they can continue with the postsecondary course work. They do have the option of testing out of any or all of these classes.

Students who do not score 80% or above on an exit level test that covers the secondary materials must also take the classes in which they failed to master the curriculum.

* These course outlines have not yet been developed.

Agriculture 1303
Animal Nutrition and Feeding

Course Objectives

Upon completion of this course the student will be able to:

1. Identify an area, a national, and a global perspective of feed production and nutrition.
2. Quantify the nutritive requirements of livestock and poultry.
3. Identify feeds by color, feel, and texture.
4. Demonstrate knowledge of nutritional and mineral supplement programs for livestock and poultry.
5. Quantify and identify feedstuffs into forages, roughages, etc.
6. Quantify utility and use of feedstuffs into ration formulation.
7. Develop least cost ration formulation.
8. Identify nutritional deficiencies in livestock and poultry and develop methodology whereby the deficiencies can be eliminated.
9. Demonstrate the intricate marketing structure associated with feeds and feeding.

Course Outline

I. Nutrition

- A. Feeds vs Foods
- B. Principles of Nutrition
- C. Digestion and Absorption
- D. Nutrients - Metabolism
- E. Nutrition of Diseases - Toxins

II. Feeds

- A. Types and Roles of Feedstuffs
- B. Pasture and Range Forages
- C. Hay
- D. Silage, Haylage - High Moisture Grain
- E. Grains, High Energy Feed
- F. Protein Supplements
- G. By Product Feeds and Crop Residues
- H. Feed Supplements - Additives - Implants
- I. Feed Processing
- J. Feed Analysis - Feed Evaluation
- K. Buying Feeds - Commercial Feeds - Feed Laws

III. Feeding

A. Animal Behavior - Environmental
B. Feeding Standards - Ration Formulation
C. Feeding Beef Cattle
D. Feeding Dairy Cattle
E. Feeding Sheep
F. Feeding Goats
G. Feeding Swine
H. Feeding Poultry
I. Feeding Horses
J. Feeding Rabbits
K. Feeding Mink
L. Feeding Fish

Agriculture 1304
Animal and Poultry Health Management

Course Objectives

Upon completion of this course, the student will be able to:

1. Identify a global as well as an area perspective of animal diseases.
2. Quantify diseases of livestock.
3. Develop plans for livestock buildings and equipment.
4. Describe the role of animal behavior in livestock disease.
5. Provide knowledge of feeding programs for livestock having diseases.
6. Acquire a workman's knowledge of animal health, disease prevention, and parasite control.
7. Understand impact of disease on profit picture of ranch enterprise.
8. Understand causes of USA and foreign trevist of livestock.

Course Outline

I. Diseases of the Blood, Lymphatic, and Cardiovascular Systems.

II. Diseases of the Digestive System.

III. Diseases of the Endocrine System.

IV. Diseases of the Eye and Ear.

V. Generalized Conditions of Animals

VI. Diseases of the Immune System.

VII. Metabolic Disturbances.

VIII. Diseases of the Musculoskeletal System.

IX. Diseases of the Nervous System.

X. Physical Influences.

XI. Diseases of the Reproductive System.

XII. Diseases of the Respiratory System.

XIII. Diseases of the Skin.

XIV. Diseases of the Urinary System.

XV. Behavioral Diseases

Agriculture 1443
Agricultural Economics

Course Objectives

Successful completion of the course will allow the student to be able to:

1. Identify an area, state, national, and global perspective of agricultural economics.
2. Develop knowledge of supply and demand.
3. Describe the role of land use, capital use, and manpower use in today's farm business.
4. Glean knowledge of market inputs into hedging, futures, and supply pictures.
5. Develop knowledge of the structure as it affects agriculture.
6. Imprint borrowing into today's business decisions.
7. Provide knowledge into assets and liabilities of farm enterprises.
8. Discover cost accounting in machinery and labor.
9. Determine optimum type of agriculture enterprises for a given type of agricultural environment.
10. Develop a system approach to farming and ranching.
11. Discover methods, means, and avenues of the availability of agricultural information.

Course Outline

I. Introduction to Agricultural Management

  A. Management

    1. The scope of the manager
    2. Views of management

II. Applying Economic Principles

  A. Marginal Analysis in Short Run Planning

    1. Input-output relationships
    2. Input-input relationships

  B. Cost Concepts in Decision Making

    1. Classifying costs
    2. Short-run and long-run costs
    3. Short-run cost curves
    4. Application of cost principles
    5. Economics of size

C. Ownership Costs: The Dirty Five

- 1. Depreciation
- 2. Interest
- 3. Repairs
- 4.. Taxes and insurance
- 5. Breakeven

III. Monitoring the Business

A. Alternative Record Systems and What They Can Provide

- 1. Levels of recordkeeping system
- 2. Output and use of record system

B. Business Analysis and Control

- 1. One record system
- 2. The inventory and depreciation schedule
- 3. Financial statement
- 4. Profit and loss statement
- 5. Financial ratio analysis
- 6. Cash flow
- 7. Performance of activity analysis
- 8. Measures of performance

C. Diagnosing Farm Business Problems

- 1. Methods of analysis
- 2. Earnings problems
- 3. Problem of size
- 4. Operational problems
- 5. Marketing problems

D. A Simplified Management Audit With Limited Information

- 1. Single income tax return: single proprietorship
- 2. Adjustment to taxable income
- 3. Simplified analysis

IV. Forward Planning

A. Budgeting Documented Decision Making

- 1. Some budget types
- 2. Budget coefficients
- 3. Pretesting a decision with patrol budgeting
- 4. Budgeting a major investment decision

B. Farm Resource Inventory

1. Resource inventory
2. Land
3. Labor
4. Capital
5. Services
6. Management
7. From inventory to planning

C. Using Enterprise Budgeting

1. Sample enterprise budgets
2. More than one budget per enterprise
3. Purpose of budget influences control
4. Comments on enterprise budgets

D. Whole Ranch/Farm Planning

1. Block budgeting
2. Cropping systems
3. Livestock systems
4. Present-normal situation
5. Cash flow feasibility

E. Linear Programming

1. Linear programming defined
2. Budgeting
3. Logic of linear programming

V. Business Organization and Resource Management

A. Types of Farm Business Ownership

1. Sole proprietorship
2. Partnership
3. Corporate

B. Credit Sources and Credit Factors

1. Production credit associations
2. Banks
3. Merchants and dealers
4. Life insurance companies
5. Federal land banks
6. Farmers home administration
7. Individuals
8. Is borrower's credit worthy? Lender's viewpoint
9. What to expect from lender

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C. Capital Use and Credit Planning

1. Alternative uses of capital
2. Use by farmers and ranchers
3. Credit
4. Principle of increasing risk
5. Time and interest rate
6. Types of loans
7. The true interest rate
8. A credit rating

D. Land Acquisition and Use Strategies

1. Incentives to control land
2. Land ownership
3. Approach to land evaluation
4. Farmland leasing
5. Lease or purchase

VI. Investment Analysis

A. Investment Analysis and Decision Making

1. Time value of money
2. Cost of capital and selecting a discount rate
3. Developing the cash flow budget

B. Choosing Between Alternative Investment Opportunities

1. Techniques
2. Present worth technique
3. Tax considerations
4. Feasibility of investment
5. Uncertainty and risk

VII. Taxes and Insurance

A. Insurance

1. Priority listing of insurance needs
2. Property insurance
3. Comprehensive liability insurance
4. Liability insurance for employees and workmen's compensation
5. Crop insurance
6. Life insurance
7. Health and accident insurance
8. Policy comparison

B. Income Tax Management

1. Method of reporting
2. When to use tax management strategies
3. Income leveling strategies
4. Special tax situations

Agriculture 2308
Cooperative Education
Poultry

Course Objective

Upon completion of this course the student will be able to:

1. Identify an area, a national and a global perspective of poultry enterprises.
2. Quantify the requirements of poultry.
3. Identify poultry facilities.
4. Demonstrate knowledge of nutritional and mineral supplement programs for poultry.
5. Quantify and identify poultry into their individual component use.
6. Quantify utility and use of poultry into end-products.
7. Develop least cost production utilization.
8. Identify nutritional deficiencies in poultry and develop methodology whereby the deficiencies can be eliminated.
9. Demonstrate the intricate marketing structure associated with poultry and poultry products.
10. Demonstrate the intricate marketing structure associated with poultry.
11. Understand the processing of poultry and poultry products.

Course Outline

Activities such as feeding, doctoring, gathering eggs, breeding, marketing products, cleaning, disease prevention, handling equipment, and building facilities for a poultry operation will be conducted. Also the slaughtering, initial processing, and further processing of poultry and poultry products will be accomplished.

The course outline provides for 50% of the semester working in a production operation and the other 50% working in a processing facility. Each days activities will be maintained in a daily log book describing problems, questions, etc. and the resultant answers of how the student, cooperator and instructor handled the problem.

Agriculture 2373
Poultry Management

Course objectives

Upon successful completion of this course, the student will be able to:

1. Identify an area, a national, and a global perspective of poultry management.
2. Quantify poultry genetics and its place in poultry meat and egg production.
3. Develop plans for housing and rearing facilities for poultry.
4. Determine the effect of climate and photoperiod on poultry production.
5. Demonstrate knowledge of nutritional supplementation of poultry.
6. Acquire working knowledge of poultry diseases and insects.
7. Develop ideas for processing poultry and poultry waste.
8. Outline transportation systems for movement of poultry.
9. Develop a knowledge of marketing structure of poultry.
10. Quantify utility of poultry into foodstuffs and chemicals.
11. Develop a knowledge of hatchery management and chick placement.

Course Outline

I. Commercial Poultry Industry Related to Agricultural Food Production

    A. Poultry Development
    B. Poultry as an American Enterprise

II. Classification, Nomenclature, and Showing of Poultry

    A. Domestication and Development of Breeds
    B. Breed Identification and Classification
    C. Terminology
    D. Showing

III. Avian Anatomy and Physiology

   A. Feathers and Skin
   B. Skeletal System
   C. Muscular System
   D. Digestive System
   E. Urinary System
   F. Cardiorespiratory System
   G. Reproductive System
   H. Endocrine and Nervous System

IV. Genetics, Breeding, Culling and Selection

   A. Genetic Inheritance
   B. Breeding Practice
   C. Culling and Selection

V. Reproduction, Embryonic Development, and Incubation

   A. Reproduction
   B. Embryology
   C. incubation

VI. Brooding, Rearing, Housing, Equipment and Production

   A. Brooding and Rearing
   B. Housing and Equipment
   C. Ventilation Systems and Environment
   D. Waste Disposal and Utilization
   E. Poultry Production

VII. Nutrition and Feeding

   A. Poultry Nutrition
   B. Feeding Poultry

VIII. Management and Disease Control

   A. Disease
   B. Disease Problems
   C. Abnormal Conditions
   D. Disease Prevention and Control

IX. Food Eggs and Egg Products

   A. Egg Quality
   B. Egg Products and Marketing

X. Poultry Meat and Meat Products

   A. Processing Poultry Meat
   B. Government Regulation of Poultry Processing
   C. Feather Processing
   D. Purchase, Preparation, and Consumption of Poultry Meat

XI. Agricultural Animal Welfare

- A. Animal Care
- B. Animal Rights

XII. Planning and Managing a Poultry Enterprise

- A. Hatching Operation Management and Design
- B. Planning
- C. Management

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Agriculture 2406
Genetics

Course Objectives

Upon completion of this course the student will be able to:

1. Identify an area, a national, and a global perspective of the role of genetics.
2. Quantify the genetic requirements of livestock, plants, and poultry.
3. Identify genetic influences on reproduction, production, and sex.
4. Demonstrate knowledge of genetic interactions that influence livestock, plants, and poultry.
5. Quantify and identify genetic interactions in plants, livestock, poultry, etc.
6. Quantify utility and use of genetic materials in the environment.
7. Develop gene splicing interaction.
8. Identify genetic deficiencies in livestock, plants, and poultry and develop methodology whereby the deficiencies can be eliminated.
9. Demonstrate the intricate marketing structure associated with plant and animal genetic materials.

Course Outline

I. Introduction

   A. Life Origin
   B. Domestication of Plants and Animals
   C. Present Status and Problem

II. Basic Processes of Inheritance

   A. The Science of Genetics

III. Reproductive Processes

   A. Male
   B. Female
   C. Augmenting Reproductive Rates on Plants and Animals

IV. Qualitative Genetics

   A. Lethals and Abnormalities
   B. Colors
   C. New Types
   D. Disease and Resistance
   E. Chromosomal Abnormalities

V. Variation

    A. Nature
    B. Measuring

VI. Population Genetics

    A. General
    B. Changes in Gene Frequency
    C. Heredity

VII. Inbreeding and Relationship

    A. Inbreeding
    B. Irregular Inbreeding
    C. Effects of Inbreeding
    D. Inbreeding Experiments

VIII. Outbreeding

    A. Outcrossing
    B. Crossing
    C. Grading
    D. Inbred Lines
    E. Hybridization

IX. Principles of Selection

    A. Characteristics
    B. Effectiveness of Selection
    C. Individual
    D. Mass
    E. Pedigree
    F. Family
    G. Progeny
    H. Environmental Relations
    I. Selection Plateaus

X. Performancy and Progeny Testing

    A. Special vs Field
    B. Species

XI. Improvements

    A. Livestock
    B. Plant

Agriculture 2483
Reproductive Physiology

Course Objectives

Upon completion of this course the student will be able to:

1. Identify an area, a national, and a global perspective of livestock reproduction.
2. Quantify the reproductive requirements of livestock, plants, and poultry.
3. Identify livestock by size, weight, and sex.
4. Demonstrate knowledge of courses of reproductive failure in livestock and poultry.
5. Quantify and identify forces which interact in reproductive capacities of animals.
6. Quantify utility and use of methodology available in reproductive performance.
7. Develop knowledge of pregnancy palpation.
8. Identify breeding methods of livestock and poultry.
9. Demonstrate the intricate marketing structure associated with embryo transplant and artificial insemination of livestock.

Course Outline

I. Macroscopic Male Functional Anatomy

  A. Testis
  B. Epididymis
  C. Deferent Duct
  D. Scrotum
  E. Descent of Testis
  F. Castration
  G. Cryptorchid
  H. Spermatic Cord
  I. Vesicular Glands
  J. Colliculus Seminalis
  K. Prostate
  L. Pelvic Urethra
  M. Bulbourethral Glands
  N. Penis
  O. Retractor Penis Muscles
  P. Glans
  Q. Prepuce
  R. Prolapse

II. Microscopic Anatomy and Spermatogenesis

A. Cell Types
B. Scrotum
C. Testis
D. Efferent Ducticles
E. Epididymis
F. Deferent Duct
G. Vesicular Glands
H. Prostrate Glans
I. Pelvic Urethra
J. Bulbourethral Glands
K. Penis
L. Glans
M. Prepuce
N. Sheath

III. Hormones and Puberty in the Male

A. Hormones
B. Male Hormones
C. Puberty

IV. Ejeculation and Semen Collection

A. Ejaculation
B. Impotentia Coeundi
C. Semen Collection

V. Breeding Soundness Evaluation

A. General Observations
B. Reproductive Organs
C. Internal Organs
D. Semen Evaluation
E. Criteria
F. Laboratory Scoring System
G. Field Evaluation
H. Final Evaluation
I. Breeding Capacity Tests
J. When to Evaluate Sires
K. Summary

VI. Semen Production, Processing and Storage

  A. Sperm Production
  B. Fate of Sperm
  C. Sire Selection
  D. Nonreturn Rate
  E. Processing Bull Semen
  F. General
  G. Processing Ram Semen
  H. Processing Boar Semen
  I. Processing Stallion Semen
  J. Processing Human Semen
  K. Conclusion

VII. Macroscsopic Female Functional Anatomy

  A. Ovaries
  B. Oviduct
  C. Uterus
  D. Cervix
  E. Vagina
  F. Vestibule
  G. Vulva and Clitoris

VIII. Microscopic Female Functional Anatomy

  A. Ovaries
  B. Oviduct
  C. Uterus
  D. Cervix
  E. Vagina
  F. Hymen
  G. Vestibule
  H. Vulva
  I. Clitoris

IX. Hormones and Puberty in the Female

  A. Hormones
  B. Puberty

X. Estrus and Estrus Cycle

  A. Estrus

XI. Ovulation Control

  A. Cow
  B. Ewe
  C. Sow
  D. Mares
  E. Woman
  F. Superovulation

XII. Artificial Insemination

- A. Introduction
- B. Cattle
- C. Sheep
- D. Sow
- E. Mare
- F. Woman

XIII. Fertilization and Embryo Transfer

- A. Gamete Transport
- B. Fertilization
- C. Embryo Transfer

XIV. Gestation and Pregnancy Determination

- A. Gestation
- B. Pregnancy Determination

XV. Parturition and the Postpartum Period

- A. Parturition

XVI. Visual Appraisal for Breeding Efficiency

- A. Fertile Male
- B. Infertile Male
- C. Fertile female
- D. Infertile Female
- E. General

XVII. Reproductive Diseases

- A. General

Food Technology 2312
Food Quality and Sanitation

Course Objectives

Upon completion of this course the student will be able to:

1. Identify an area, a national, and a global perspective of food quality and sanitation problems.
2. Quantify the role of microorganisms in quality control and sanitation.
3. Identify food contaminants..
4. Demonstrate knowledge of sanitizers, sanitation equipment, and systems.
5. Quantify and identify waste product handling and pest control.
6. Quantify utility and use of quality control and sanitation methods in various product processing..
7. Develop a quality assurance and sanitation program.
8. Identify sanitation and quality control problems and develop methodology whereby the problems can be eliminated.
9. Demonstrate the relationship of good management and sanitation.

Course Outline

I. Introduction - Why Sanitation?

  A. Sanitation Defined
  B. Sanitation Regulations

II. Microorganisms and Sanitation

  A. Factors Affecting Microbial Proliferation
  B. Deteriorative Effects of Microorganisms
  C. Food Poisoning and Infection
  D. Methods of Killing Microorganisms
  E. Assessment of Microbial Load

III. Food Contamination Sources

  A. Transmission of Foodborne Disease and Spoilage Microorganisms
  B. Contamination of Various Food Products
  C. Other Contamination Sources
  D. Protection Against Contamination

IV. Personal Hygiene and Food Handling

  A. Health and Personal Hygiene
  B. Sanitary Handling of Food

V. Cleaning Compounds

  A. Cleaning Compound Properties
  B. Classification of Cleaning Compounds
  C. Scouring Compounds
  D. Handling and Storage of Cleaning Compounds
  E. Precautions related to Handling Cleaning Compounds

VI. Sanitizers

  A. Sanitizing Sources
  B. Characteristics and Applications of Commonly Used Sanitizers

VII. Sanitation Equipment and Systems

  A. Importance of Cleaning Equipment and Technology
  B. Cleaning Methods
  C. Cleaning Equipment

VIII. Waste Product Handling

  A. Importance of a Waste Disposal Survey
  B. Disposal of Solid Wastes
  C. Wastewater Handling

IX. Pest Control

  A. Insect Contamination
  B. Rodent Infestation
  C. Bird Infestation
  D. Precautions Related to the Use of Pesticides
  E. Integrated Pest Management

X. Dairy Processing and Product Sanitation

  A. Plant Construction Considerations
  B. Development and Implementation of a Sanitation Program
  C. Cleaning Equipment for Dairy Facilities

XI. Meat Production and Product Sanitation

  A. Cleaning Systems for Meat Plants
  B. Cleaning Compounds for Meat Plants
  C. Sanitizers for Meat Plants
  D. Sanitation Practices
  E. Sanitation Procedures

XII. Seafood Processing and Product Sanitation

  A. The Role of Hygienic Design
  B. Sources of Contamination of Seafood Plants
  C. Plant Cleaning Principles
  D. Improved Sanitation Through Recovery of By-Products
  E. Sanitary Standards for Seafood Operations

XIII. Fruit and Vegetable Processing and Products Sanitation

A. Prevention of Contamination
B. Hygienic Design
C. Effecting a Sanitation Program
D. Cleaning Systems for Processing Plants
E. Cleaning Compounds for Processing Plants
F. Sanitizers for Processing Plants
G. Cleaning Procedures for Processing Plants
H. Evaluation of Sanitation Effectiveness

XIV. Development of a Quality Assurance and Sanitation Program

A. Quality Assurance for Effective Sanitation
B. Organization and Administration of a Quality Assurance Program
C. Role of Statistical Quality Control

XV. Management and Sanitation

A. The Role of Management in Sanitation

Food Technology 2313
Technology of Food Processing

Course Objectives

Upon completion of this course the student will be able to:

1. Identify on an area, a national, and global basis, processes that are a part of food processing.
2. Identify by color, smell, and feel food processing conditions.
3. Demonstrate knowledge of processing problems that affect human population.
4. Identify control measures for processing methodology used in foodstuffs.
5. Identify food additives and processes used in food preparation.
6. Identify modes of food preparation.
7. Identify food packaging technology.

Course Outline

I. What is Food?

   A. In Modern Society
   B. Composition
   C. Micro and Macro Ingredients
   D. Nutritive Value
   E. Industrial Food Processing and Health Food

II. Microorganisms in Food

   A. Forms of Life
   B. Microbial Growth and Spoilage
   C. Water Activity
   D. Food Poisoning
   E. Detection of Microorganisms
   F. Food Fermentation
   G. Role of Microorganisms in Human Nutrition

III. Food Industry

   A. Manufacturing and Preservation
   B. Food Processing
   C. Plant Organization
   D. Quality Control
   E. Government Regulations
   F. Material and Energy Balances
   G. Solubility and Concentration

IV. Processing Fruits and Vegetables

- A. Characteristics
- B. Photosynthesis and Respiration
- C. Harvesting and Ripening
- D. Storage
- E. Preparation Processes
- F. Blanching
- G. Products
- H. Jams and Jellies
- I. Sugar
- J. Nutritional Importance

V. Cereal Grains and Oil Seeds

- A. Raw Materials
- B. Cereal Grains
- C. Baking Bread
- D. Pastry
- E. Milling Processes
- F. Malting
- G. Oil Seed Extraction
- H. Margarine and Vegetable Oils
- I. Oil Emulsions
- J. Nutritional Aspects

VI. Milk and Dairy Products

- A. Milk Production
- B. Milk Composition
- C. Milk Processing
- D. Culturing
- E. Cheese
- F. Butter
- G. Ice Cream
- H. Concentrated and Dried Milk
- I. Nutritive Value of Milk

VII. Processing of Meat, Poultry, and Fish

- A. Sources
- B. Composition
- C. Muscle Nomenclature
- D. Fresh Meat
- E. Curing
- F. Processing
- G. Poultry
- H. Fish and Seafood
- I. Nutritive Value

VIII. Alcoholic and Non-Alcoholic Beverages

A. Products
B. Fermentation
C. Processing
D. Wine Products
E. Coffee and Tea
F. Soft Drinks
G. Nutritional

IX. Food Additives and Food Ingredients

A. Food Additives - What are they?
B. Functional Properties
C. Food Ingredients
D. Food Additives
E. Testing Food Additives
F. Chemical Preservatives
G. Food Contaminants
H. Labeling Requirements
I. Effects in Human Nutrition

X. The Process of Food Preservation

A. Causes and Prevention of Food Spoilage
B. Food Dehydration
C. Food Freezing
D. Heat Sterilization and Canning
E. Other Processes
F. Irradiation
G. Significance of Long-Term Preservation

XI. Food Packaging Technology

A. Purpose
B. Properties of Food Packaging Materials
C. Lamination
D. Effects on Food Stability
E. Modified Atmosphere Packaging
F. Role of Packaging in Distribution Chain

VIII. REFERENCE MATERIAL LISTS

The following lists of reference materials are identified by secondary course.

In addition, a general reference list is provided to be used as supplemental references to those listed for the courses.

Instructional Materials Service
Agriscience 101 References

Catalog Number	Title
4906	Teacher's Key - AgSc 101
CG101	Curriculum Guide for AgSc 101
2101	Transparencies for AgSc 101
8350	Supply and Demand of Food and Fiber
8351	Renewable and Nonrenewable Agricultural Resources
8352	The Impact of Agriculture on World Economy
8353	Interdependency of Agriculture and Society
8354	Key Developments Shaping World Agriculture
8355	Key Developments Shaping US Agriculture
8356	Factors Affecting World Trade
8357	The Impact of Agriculture as a Political Tool
8358	Environmental Concerns in Agriculture
8359	Methods of Protecting the Environment
8360	The Effects of the Environment on Agriculture
8361	World Food Chain - From Production to Consumption
8362	World Fiber Chain - From Production to Consumption
8363	Impact of Research and Development in Ag Science and Technology
8364	Research and Development Techniques for Class and Laboratory
8365	Developing Professionalism and Ethics
8366	Using Proper Etiquette and Behavior
8367	Exploring Personal Relations
8368	Practicing Good Grooming and Health Habits
8369	Understanding Importance of Effective Communication - Spoken Word
8370	Understanding Importance of Effective Communication - Written Word
8371	Improving Communication Skills Through Organized Activities
8372	Utilizing the Media for Effective Communication - Public Relations
8373	Importance and Procedures of Keeping Accurate Records
8374	Importance and Use of Budgeting
8375	Importance and Procedures of Personal Finance
8376	Types of Supervised Agricultural Experience
8377	Characteristics of Successful Agricultural Programs
8378	Planning Supervised Agricultural Experience Programs

Instructional Materials Service
Agriscience 102 References

Catalog Number	Title
4907	Teacher's Key - AgSc 102
CG102	Curriculum Guide for AgSc 102
2102	AgSc 102 Transparencies
K102	Teacher's Key to Topic Tests for AgSc 102
T102	Topic Tests for AgSc 102
8380	Importance and Formation of Soils
8381	Soil Formations
8382	Components and Properties of Soil
8383	Soil Classification Systems
8384	Plant Structure and Functions of Plant Parts
8385	Plant Growth and Development: Seed Germination
8386	Plant Growth and Development: Production, Use, Storage of Food
8387	Plant Genetics
8388	Sexual and Asexual Reproduction of Plants
8389	Plant Breeding
8390	Plant Recognition: Classification and ID of Field Crop Plants
8391	Animal Growth and Development
8392	Anatomy and Physiology of Animals
8393	Breeds of Beef Cattle
8394	Breeds of Swine
8395	Breeds of Sheep
8396	Breeds of Dairy Cattle
8397	Classes, Breeds, and Varieties of Poultry
8398	Breeds of Horses
8399	Selecting Beef Cattle
8400	Selecting Swine
8401	Selecting Sheep
8402	Selecting Dairy Cattle
8403	Selecting Poultry
8404	Selecting Horses
8405	Animal Reproduction
8406	Animal Genetics
8407	Methods of Animal Breeding
8408	Importance of Food Science Technology
8409	Trends in Food Production
8410	Identifying Major Areas of Agricultural Mechanics
8411	Identifying Safety and Laboratory Procedures
8412	Performing Basic Skills in Agricultural Construction
8413	Identifying Lumber and Computing Bill of Materials
8414	Identifying and Using Fasteners
8415	Agricultural Chemicals and the Environment
8416	Proper Use of Agricultural Chemicals
8417	Alternative Energy Sources
8418	Energy Conservation
8419	Water Conservation

Instructional Materials Service
Agriscience 221 References

Catalog Number	Title
0116	Agricultural Mechanization Technical Information
2511	Agricultural Mechanization Transparencies
4629	Agricultural Mechanics: Fundamentals and Application
4908	Teacher's Key - AgSc 221
CG221	Curriculum Guide for AgSc 221
K221	Teacher's Key to Topic Tests for AgSc 221
T221	Topic Tests for AgSc 221
8412	Performing Basic Skills in Agricultural Construction - Tools
8413	Identifying Lumber & Computing Bill of Materials
8414	Identifying and Using Fasteners
8600	Agricultural Mechanics: Importance, Safety & Lab Management
8601-A	Identifying & Using Power Tools
8601-B	Measuring & Marking Devices
8602-A	Electrical Principles & Terminology
8602-B	Electrical Wiring
8603	Pipe, Plumbing, & Water Systems
8604-A	Estimating Materials Needed for Concrete
8604-B	Placing, Reinforcing, Finishing, & Curing Concrete
8605-A	Cost Effective Construction - Materials
8605-B	Cost Effective Construction - Plans
8606	Materials and Painting Techniques
8607	Fencing Materials & Construction
8608	Identifying, Cutting, Drilling, Shaping, & Filing Metal
8609-A	Oxyfuel Welding & Cutting
8609-B	Arc Welding - Introduction & Fundamentals
8609-C	Arc Welding - Basic Steps
8609-D	Arc Welding - Joints, Positions, Uses

Instructional Materials Service
Agriscience 222 References

Catalog Number	Title
4630	Home Repair Handbook
4609	Teacher's Key for AgSc 222
CG222	Curriculum Guide for AgSc 222
8412	Performing Basic Skills in Agricultural Construction - Tools
8602-A	Electrical Principles and Terminology
8602-B	Electrical Wiring
8616	Safety in the Home
8617	Selecting and Using Wood and Metal Fasteners
8618	Repairing and Maintaining the Home Plumbing System
8619	Repairing and Maintaining the Home Electrical System
8620-A	Servicing & Maintaining Home Heating & Cooling Systems
8620-B	Computing Insulation Values & Planning Attic Ventilation
8620-C	Home Energy Efficiency and Solar Heating
8620-D	Maintaining Fireplaces, Wood Heaters, and Chimneys
8621-A	Planning for Painting-Preparing Surfaces-Applying Paint
8621-B	Repairing Walls, Ceilings, and Trim
8621-C	Residential Pest Control
8622	Adjusting and Maintaining Doors and Windows
8623	Repairing and Maintaining the Roof
8624	Estimating Home Concrete Needs
8625	Servicing and Maintaining Engines and Vehicles
8626	Reconditioning Edge Tools
8793-B	Maintaining and Trouble Shooting Small Air-Cooled Engines

Instructional Materials Service
Agriscience 231 References

Catalog Number	Title
4910	Teacher's Key - AgSc 231
CG231	Curriculum Guide for AgSc 231
K231	Teacher's Key - AgSc 231
T231	Topic Tests for Ag Sc 231
8380	Importance and Formation of Soils
8381	Soil Formations
8382	Components and Properties of Soil
8383	Soil Classification Systems
8633-A	Soil Sampling Methods
8634-A	Soil Erosion: Kinds, Factors, Control
8634-B	Fundamentals of Soil Use and Land Management
8635-A	Soil Water Importance - Loss/Drainage
8635-B	Water Requirements of Crops
8635-C	Soil Water Conservation Measures
8636-A	Primary Soil Nutrients
8636-B	Fertilizers: Utilization and Types
8636-C	Importance of Organic Matter
8636-D	Recognizing Nutrient Deficiencies
8636-E	Nutrients and pH of Soil
8637-A	Economic Importance and Uses of Major Agricultural Crops
8637-B	Major Agricultural Crop Production Areas
8390	Plant Recognition: Classification and ID of Field Crop Plants
8637-C	Identification of Major Agricultural Crops: Plant Morphology
8637-D	Identification of Major Agricultural Crops: Field Crops
8637-E	Identification of Major Agricultural Crops: Range Plants
8637-F	Identification of Major Agricultural Crops: Selection of Trees
8637-G	Identification of Major Agricultural Crops: Fruits and Vegetables
8637-H	Identification of Major Agricultural Crops: Nursery/Landscape
8384	Plant Structure and Functions of Plant Parts
8385	Plant Growth and Development: Seed Germination
8386	Plant Growth and Development: Production, Use, Storage of Food
8388	Sexual and Asexual Reproduction of Plants
8640-A	Nutrient Requirements of Plants
8640-B	Inorganic and Organic Fertilizers
8640-C	Methods/Rates/Times - Fertilizer Application
8641-A	Mechanical Techniques of Plant Management: Irrigation and Protection Practices for Cropland
8641-B	Mechanical Techniques of Plant Management: Harvest and Post-Harvest Practices for Crops
8641-C	Chemical Techniques of Plant Management
8642-A	Livestock, Dairy, and Poultry Production
8643	Evaluation and Selection of Dairy Goats

Instructional Materials Service
Agriscience 231 References
Continued

Catalog Number	Title
8644-A	Live Animal Evaluation and Grading
8644-B	Poultry Carcass Evaluation
8399	Selecting Beef Cattle
8400	Selecting Swine
8401	Selecting Sheep
8402	Selecting Dairy Cattle
8403	Selecting Poultry
8404	Selecting Horses
8332	Selection of Rabbits
8645-A	Safe Handling and Restraining of Animals
8645-B	Surgical Skills - Castration
8645-C	Surgical Skills - Dehorning
8645-D	Surgical Skills - Docking
8645-E	Performing Common Immunization Skills
8645-F	Methods of Identifying Livestock
8645-G	Livestock Transportation
8646-A	The Circulatory System
8646-B	The Respiratory System
8646-C	The Skeletal System
8646-D	The Muscular System
8646-E	The Digestive System
8405	Animal Reproduction
8646-F	The Exterior, Nervous, Urinary, and Endocrine Systems of Domestic Animals
8647-A	Feed Nutrients
8647-B	Classes of Feed
8647-C	Feed Additives

Instructional Materials Service
Agriscience 241 References

Catalog Number	Title
CG241	Curriculum Guide for AgSc 241
4911	Teacher's Key for AgSc 241
8010	Meat Identification Charts (Beef, Pork, and Lamb)
8408	The Importance of Food Science Technology
8409	Trends in Food Production
8644-B	Poultry Carcass Evaluation
8820-A	Evaluating and Grading Carcasses and Wholesale Cuts
8823-C	Research in Animal and Food Science Technology
8653-A	Trends in World Populations
8653-B	Trends in Supply and Demand of Food Products
8654	Nutritive Value of Food Groups
8655-A	Inspection Standards for the Food Industry
8655-B	Control of Insects and Rodents in the Food Industry
8655-C	Chemicals for Sanitation in the Food Industry
8656	Preparing Livestock Carcasses for Market
8657	USDA Inspection of Beef, Pork, and Lamb
8658	Preparation of Processed Meats
8659-A	The Poultry Slaughtering Process
8659-B	Retail Cuts and Value Added Products of Poultry
8660-A	Classes and Qualities of Fish and Seafood
8660-B	Preparing Fish for Food
8660-C	Processing Seafood and Fabricating Specialty Fish Products
8661-A	Preserving Red Meat, Poultry, and Fish
8661-B	Packaging and Labeling Red Meat, Fish, and Poultry
8661-C	Refrigerating & Freezing Red Meat, Fish, and Poultry
8662	Identifying By-Products of the Meat Industry
8663-A	Handling and Storing of Eggs
8663-B	Grading Eggs
8663-C	Egg Marketing Process
8664-A	Preparing Milk for Processing
8664-B	Processing Milk and Dairy Products
8665-A	Processing Cultured Milk Products
8665-C	Processing Frozen Desserts from Milk
8665-D	Preparing Butter and Concentrated/Dried Milk Products
8666-A	Transporting, Receiving and Storing Fruits, Vegetables and Nuts
8666-B	Classifying and Grading Fruits, Vegetables, and Nuts
8666-C	Trimming, Washing, Waxing, Peeling, and Blanching Fruits and Vegetables
8666-D	Mechanical and Chemical Preservation of Fruits and Vegetables
8666-E	Packaging and Storing Fruits and Vegetables
8667-A	The Food Marketing Process
8667-B	Pricing, Labeling and Displaying Food Products
8667-C	Maintaining Stock and Quality Control of Food Products
8667-D	Convenience Food in Consumer Preference
8714-A	Purpose and Importance of Marketing
8714-D	Types of Agricultural Markets

Instructional Materials Service
Agriscience 311 References

Catalog Number	Title
4773	Farm and Ranch Business Management
CG311	Curriculum Guide for AgSc 311
4914	Teacher's Key for AgSc 311
8706-A	Importance of Agriculture
8706-B	Management Roles & Functions
8706-C	Management Decision-Making
8706-D	Goals and Objectives
8707-A	Economic Systems
8707-B	Supply & Demand
8707-C	Production Economics: Maximizing Profits
8708-A	Income & Cost of Production
8708-B	Enterprise Budgets
8708-C	Total Budgeting
8708-D	Partial Budgeting
8709-A	Management Information Systems
8709-B	Accounting
8709-C	Balance Sheet
8709-D	Income Statement
8709-E	Cash Flow Statement
8709-F	Financial Statement Analysis
8709-G	Income Taxes and Social Security
8709-H	Production Records
8709-I	Depreciation
8710-A	Obtaining Capital Resources
8710-B	Importance & Types of Credit
8710-C	Agricultural Loan Institutions
8710-D	Computing Interest
8710-E	Types of Loans
8711-A	Business Legal Structures
8711-B	Agricultural Laws and Regulations
8711-C	Legal Documents
8712-A	Risk Management
8712-B	Types of Insurance
8713-A	Past Agricultural Policy
8713-B	Recent & Current Agricultural Policies
8714-A	Purpose and Importance of Marketing
8714-B	The Competitive Environment
8714-C	Domestic and International Marketing Factors
8714-D	Types of Agricultural Markets
8714-E	Marketing Alternatives for Production Agriculture
8714-F	Forward Contracting: Cash and Futures
8714-G	Effects of Government Programs
8715-A	Use & Selection of Computers - Agribusiness
8716-A	Employee Benefits
8716-B	Employer/Employee Relationships
8721-A	Management Roles and Functions
8721-B	Management Goals and Decision Making
8721-C	Managing Risk and Uncertainty
8722-A	Economic Systems, Money Price, and Government Policy
8722-B	Economics: Supply and Demand

Instructional Materials Service
Agriscience 312 References

Catalog Number	Title
CG312	Curriculum for AgSc 312
4915	Teacher's Key for AgSc 312
8736-A	Self Concept
8736-B	Social Skills
8736-C	Professional Image
8737-A	Leaders and Leadership
8737-B	Leadership Styles
8738-A	Personal Leadership Potential
8738-B	Basic Human Needs
8738-C	Motivation and Influence
8738-D	Preparing Resumes and Applications
8739-A	Job Interviews
8739-B	Employer Expectations
8739-C	Work Related Ethics
8739-D	Working with Co-Workers
8740-A	Job Applicants
8740-B	Evaluation of Employees
8740-C	Complaints and Appeals
8740-D	Employee Obligations
8740-E	Business Related Ethics
8741-A	The Communication Process
8741-B	Barriers to Communication
8741-C	Written Communication
8741-D	Verbal Communication
8741-E	Non Verbal Communication
8741-F	Listening
8741-G	Working with Diverse Groups
8741-H	Group Discussions
8741-I	Successful Meetings
8741-J	Friends and Friendship
8742-A	Organizing Groups
8742-B	Program of Activities
8742-C	Decision Making
8742-D	Problem Solving
8742-E	Personal Goals
8742-F	Time Management

Instructional Materials Service
Agriscience 321 References

Catalog Number	Course
CG321	Curriculum Guide for AgSc 321
4917	Teacher's Key for AgSc 321
8108	Agricultural Mechanics Safety Tests
8410	Identifying Major Areas of Agricultural Mechanics
8411	Identifying Safety and Laboratory Procedures
8412	Performing Basic Skills in Agricultural Construction - Tools
8413	Identifying Lumber and Computing Bill of Materials
8600	Agricultural Mechanics: Importance, Safety & Lab Management
8601-A	Identification and Safe Use of Power Tools
8601-B	Measuring & Marking Devices
8602-A	Electrical Principles, Terminology and Safety
8602-B	Electrical Wiring
8603	Installing & Maintaining Pipe, Plumbing Fixtures, & Water Systems
8604-A	Estimating the Materials Needed for Concrete
8604-B	Constructing Forms, Placing, Reinforcing, Finishing & Curing Concrete
8605-A	Planning Cost Effective Construction - Selecting Materials
8605-B	Planning Cost Effective Construction - Preparing Plans
8606	Selecting Materials and Applying Painting Techniques
8607	Selecting Materials & Planning Construction of Fences
8617	Selecting and Using Wood and Metal Fasteners
8618	Repairing and Maintaining the Home Plumbing System
8619	Repairing and Maintaining the Home Electrical System
8620-B	Computing Insulation Values & Planning Attic Ventilation
8621-B	Repairing Walls, Ceilings, and Trim
8622	Adjusting and Maintaining Doors and Windows
8623	Repairing and Maintaining the Roof
8763	Planning Buildings and Selecting Equipment
8764	Utilizing Computers and Computer Assisted Design
8765	Planning Footings, Foundations and Floors
8766	Selecting Electric and Solar Fends Controls and Components
8767	Planning for Site Preparation
8768	Using Tilt-Up Construction
8769	Using Masonry Construction

Instructional Materials Service
Agriscience 321 References
Continued

Catalog Number	Course
8770	Evaluating Passive Energy Storage and Non-Traditional Construction
8771	Selecting and Using Tripod Levels
8772	Measuring Land
8773	Planning, Installing, and Maintaining Irrigation Systems
8774	Complete Set Ag Sc 321 (35 topics, 600 pages)

Instructional Materials Service
Agriscience 323 References

Catalog Number	Title
CG323	Curriculum Guide for AgSc 323
4919	Teacher's Key for AgSc 323
8790	Understanding and Applying Safe Work Practices
8791-A	Identifying, Selecting, Maintaining, and Operating Tools and Equipment
8791-B	Planning & Maintaining Agricultural Power Service Centers
8792-A	Identifying and Selecting Machines and Equipment
8792-B	Identifying and Maintaining Component Materials
8792-C	Identifying, Selecting, and Using Fasteners
8792-D	Identifying and Servicing Monitoring, Sensing, and Metering Devices
8792-E	Adjusting, Calibrating, Maintaining and Operating Equipment
8793-A	Understanding Principles of 2-Cycle and 4-Cycle Internal Combustion Engines
8793-B	Maintaining & Trouble Shooting Small Air-Cooled Engines
8793-C	Disassembling and Reassembling Small Air-Cooled Engines
8794-A	Selecting and Operating Tractors
8794-B	Maintaining Air Intake and Exhaust Systems
8794-C	Selecting Lubricants and Maintaining Lubrication Systems
8794-D	Fuel System Maintenance; Fuel Selection, Storage & Handling
8794-E	Maintaining DC Electrical Systems
8794-F	Maintaining Power Trains
8794-G	Maintaining Hydraulic Systems
8794-H	Maintaining Steering and Braking Systems
8794-I	Maintaining the Air Conditioning System
8795	Selecting, Maintaining, and Operating Electric Motors
8796	Selection, Operating, & Maintaining Hydraulic Motors & Pumps

Instructional Materials Service
Agriscience 332 References

Catalog Number	Title
CG332	Curriculum for AgSc 332
4921	Teacher's Key for AgSc 332
K332	Teacher's Key - AgSc 332 Topic Tests
T332	Topic Tests for AgSc 332
8816	The Importance of Livestock Management
8817-B	Anatomy and Physiology of Other Animal Body Systems - the Nervous, Urinary, and Endocrine Systems
8817-C	Animal Behavior
8818-A	Artificial Insemination
8818-B	Embryo Transfer
8818-C	Pregnancy Diagnosis (Palpation)
8818-D	Care of Livestock at Parturition
8820-A	Evaluating and Grading Carcasses and Wholesale Cuts
8821-B	Formulating Rations for Domestic Animals
8821-C	Quality of Commercially Prepared Feeds
8821-D	Feeding Practices of Beef, Swine, and Sheep
8822-A	Role of Bacteria, Fungi, Viruses, and Nutrition in Causing Animal Diseases
8822-B	Causes, Symptoms, Prevention and Treatment of Various Animal Diseases
8822-C	External and Internal Parasites of Poultry
8822-D	External and Internal Parasites of Livestock
8822-E	Use of Pharmaceuticals in Vaccination and Immunization
8823-A	Planning Livestock Facilities
8823-B	Animal Welfare and Animal Rights
8823-C	Research in Animal and Food Science Technology
8332	Selection of Rabbits
8391	Animal Growth and Development
8399	Selecting Beef Cattle
8400	Selecting Swine
8401	Selecting Sheep
8402	Selecting Dairy Cattle
8403	Selecting Poultry
8405	Animal Reproduction
8406	Animal Genetics
8407	Methods of Animal Breeding
8643	Evaluation and Selection of Goats
8644-A	Live Animal Evaluation and Grading
8644-B	Poultry Carcass Evaluation
8645-A	Safe Handling and Restraining of Animals
8645-B	Surgical Skills - Castration
8645-C	Surgical Skills - Dehorning
8645-D	Surgical Skills - Docking
8645-E	Performing Common Immunization Skills
8645-F	Methods of Identifying Livestock
8645-G	Livestock Transportation
8646-A	The Circulatory System
8646-B	The Respiratory System

Instructional Materials Service
Agriscience 332 References
Continued

Catalog Number	Title
8646-C	The Skeletal System
8646-D	The Muscular System
8646-E	The Digestive System
8647-A	Feed Nutrients
8647-B	Classes of Feed
8647-C	Feed Additives
8832-A	History of Livestock Domestication
8832-B	Importance of Livestock Domestication
8832-C	Livestock Breeds of Economic Importance
8833-A	External Anatomies of Domesticated Animals
8833-B	Skeletal Systems of Domesticated Animals
8833-C	Digestive Systems of Domesticated Animals
8833-D	Circulatory Systems of Domesticated Animals
8833-F	Respiratory Systems of Domesticated Animals
8833-G	Nervous Systems of Domesticated Animals
8833-H	Endocrine Systems of Domesticated Animals
8833-I	Epithelial, Connective, and Muscle Tissues of Domestic Animals
8834-A	Early Mendelian Theories of Genetics
8834-B	DNA, RNA, and Protein Synthesis
8834-C	Animal Cell Division

Poultry Science References

Instructional Materials Service
Texas A&M University
F.E. Box 2588
College Station, Texas 77843
(409) 845 - 6296

Catalog Number	Title
0040A	Poultry Occupations
0040B	Key - Poultry Occupations
0413	Regulations Governing the Voluntary Grading of Poultry/Rabbit Products (USDA)
0414	USDA Poultry Grading Manual with Supplement
0415	Standards of Quality for Eggs Chart
0416	Air Cell Gauge
0417	USDA Egg Grading Manual
0418	Poultry Science Manual for National FFA Contests
4001	Key - Poultry Products Evaluation Handbook
4003	Poultry Science and Production
4025	Caring for the Laying Flock
4030	Poultry Products Evaluation Handbook
4040	Merck Veterinary Manual
5010	1984 Interior Quality of Eggs (Slides)
5021	1984 Breeds of Poultry (Slides)
5035	1985 Chicken Broiler Processing (Slides)
5036A	1985 Judging Production Pullets and Hens (Slides)
5036B	1985 Grading Ready-to-Cook Poultry (Slides)
5036C	1985 Grading Egg Shells - Interior and Exterior (Slides)
5037	1985 New Turkey Products (Slides)
5056	1984 Types of Egg Shell Conditions (Slides)
5064	1978 Proper Handling of Birds (Poultry) (Slides)
5120	1986 Poultry Carcass Parts Identification (Slides)
5121	1986 Breaded Poultry Meat Patties (Slides)
5122	1986 Judging Carton of Eggs (Slides)
5137	1987 Whole Fryer: USDA Standards of Quality (Slides)
5138	1987 Fryer Parts: USDA Standards of Quality (Slides)
5139	1987 Egg Evaluation (Slides)
5140	1988 Evaluation of Chicken Patties (Slides)
9572	Introduction to Poultry Judging (VHS Video)
9573	Judging Pullets and Hens (VHS Video)
9574	Evaluating Ready-to-Cook Poultry (VHS Video)
9575	Egg Grading (VHS Video)
9576	Practice Poultry Judging I (VHS Video)
9577	Practice Poultry Judging II (VHS Video)

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Curriculum Publications Clearinghouse
Western Illinois University
Harrabin Hall 46
Macomb, Illinois 61455

V-131 V-TECS Catalog - Poultry Farmer

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Hobar Publications
1234 Tiller Lane
St. Paul, Minnesota 55112
(612) 633 - 3170

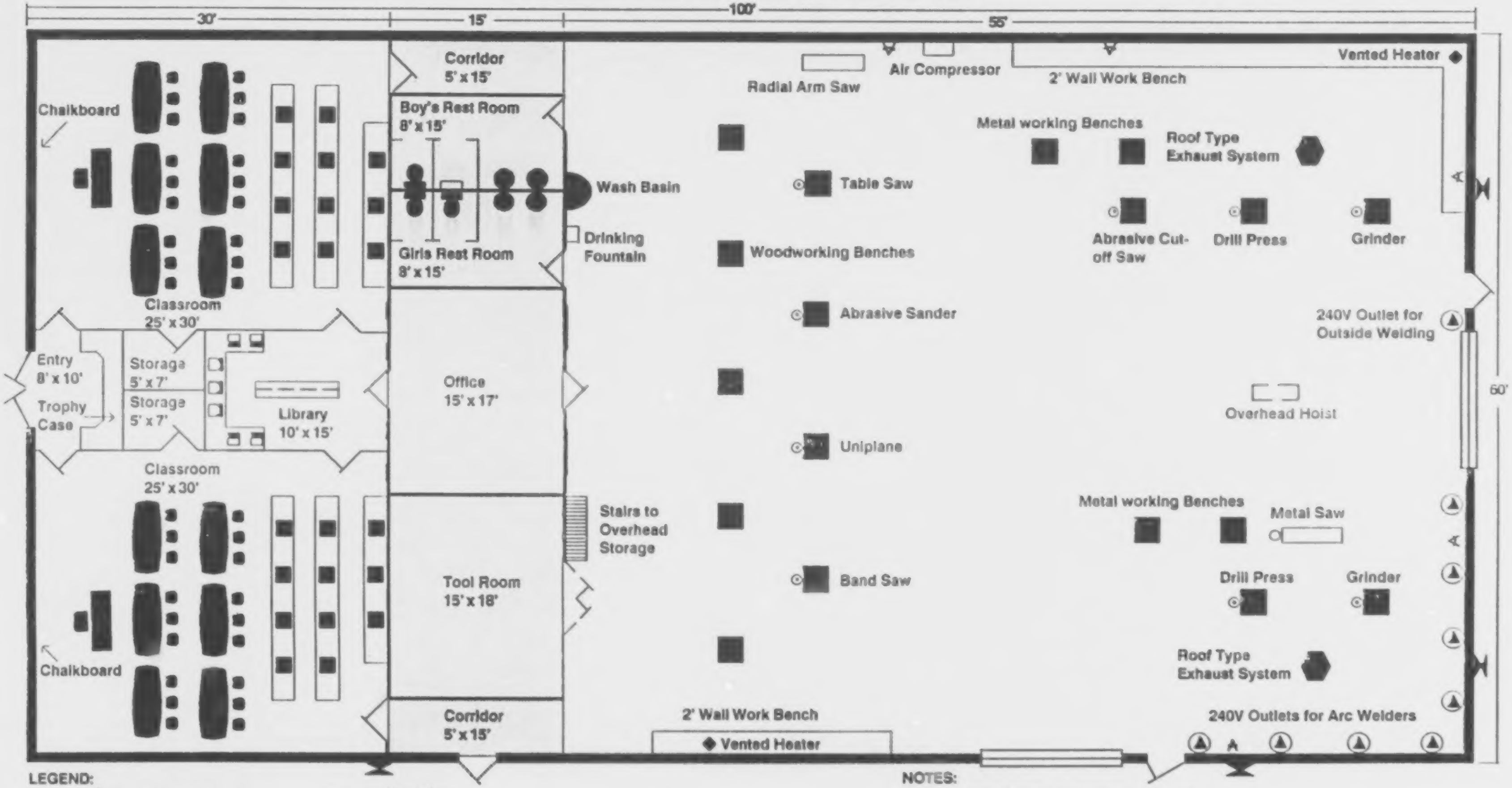
Computer Programs

AP2 - AG120 II+,IIe,IIc AP2 - AG120 - 3.5 IIGS IBM - AG120 IBM PC MS-DOS IBM - AG120 - 3.5 IBM PC TRS - AG120 TRS 80 III,4 MAC - AG120	Livestock, Poultry and Nutrition Related Review
AP2 - AG119 II+,IIe,IIc AP2 - AG119 - 3.5 IIGS IBM - AG119 IBM PC MS-DOS IBM - AG119 - 3.5 IBM PC TRS - AG119 TRS 80 III,4 MAC - AG119	Poultry and Related Review

IX. LINE DRAWING OF RECOMMENDED SECONDARY FACILITY

The following is a line drawing of the recommended classroom and shop facilities for the 2+2 program in poultry products management. In addition a drawing of a broiler house is included for those programs who wish to give their students the learning experience of a poultry broiler producer.

AGRISCIENCE CLASSROOM BUILDING AND SHOP FACILITIES



30'
15'
100'
55'
60'
Corridor
5' x 15'
Boy's Rest Room
8' x 15'
Wash Basin
Drinking Fountain
Girls Rest Room
8' x 15'
Chalkboard
Classroom
25' x 30'
Entry
8' x 10'
Trophy Case
Storage
5' x 7'
Storage
5' x 7'
Library
10' x 15'
Office
15' x 17'
Classroom
25' x 30'
Tool Room
15' x 18'
Stairs to Overhead Storage
Chalkboard
Corridor
5' x 15'
Radial Arm Saw
Air Compressor
2' Wall Work Bench
Vented Heater
Metal working Benches
Roof Type Exhaust System
Table Saw
Abrasive Cut-off Saw
Drill Press
Grinder
Woodworking Benches
Abrasive Sander
240V Outlet for Outside Welding
Overhead Hoist
Uniplane
Metal working Benches
Metal Saw
Band Saw
Drill Press
Grinder
Roof Type Exhaust System
2' Wall Work Bench
Vented Heater
240V Outlets for Arc Welders

LEGEND:

▲ 240V Wall Outlets
⊙ 240V Floor Outlets
⋏ Compressed Air Outlets
⧗ Water Faucet
| Glass Windows

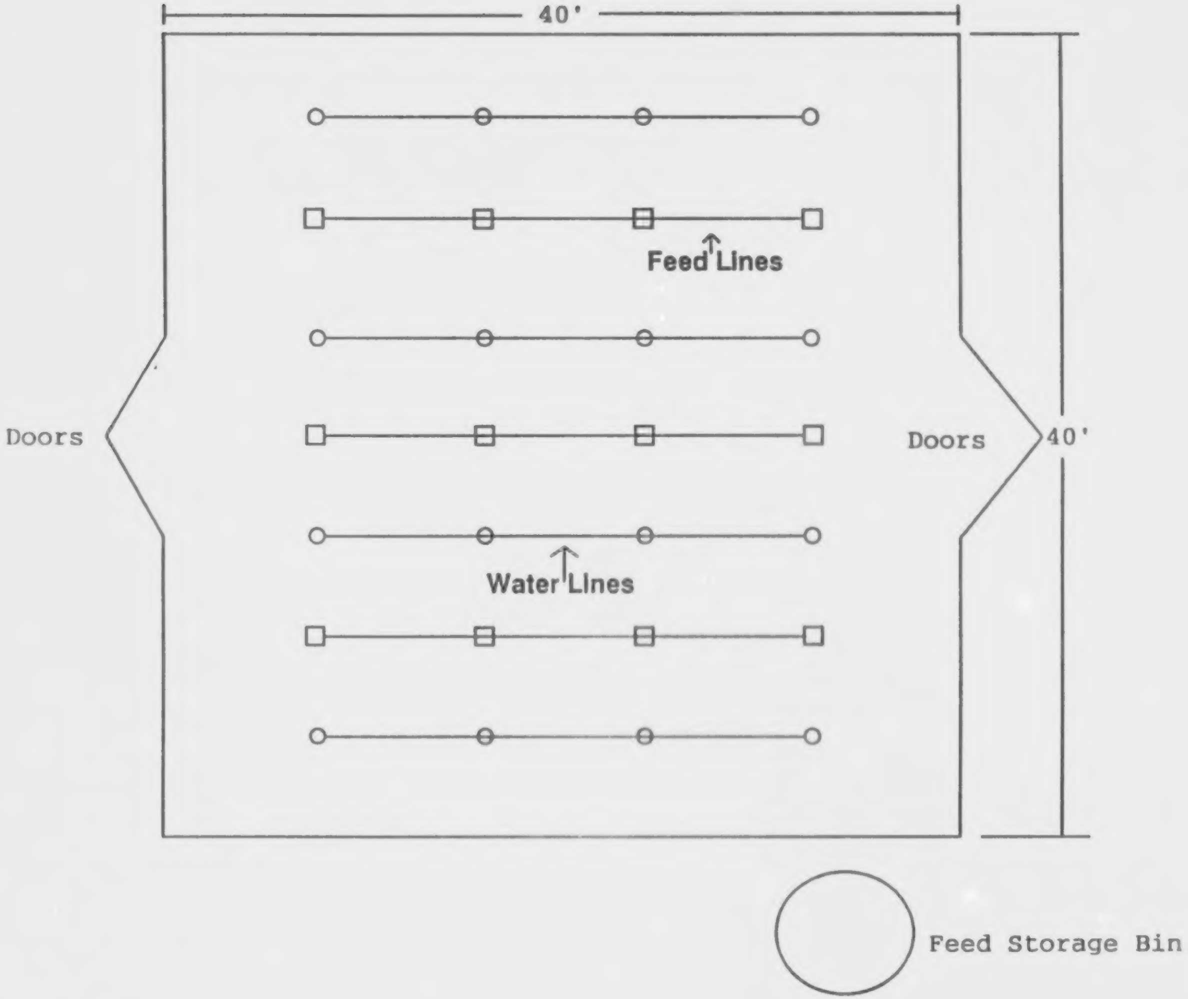
— — Wire Mesh
⋎ Regular Door
▭ 12' x 12' Overhead Door

NOTES:

120V Outlets Each 10' Along Walls
▭ Overhead Storage

MODEL POULTRY HOUSE FOR USE WITH AGRICULTURE 2+2 POULTRY PRODUCTS MANAGEMENT

Scale: 1/8" = 1'



40'
Feed Lines
Doors
Doors
40'
Water Lines
Feed Storage Bin

X. LIST OF RECOMMENDED TOOLS AND EQUIPMENT

The following is a list of recommended tools and equipment to be used at the secondary level in the teaching of the skills necessary for a student to succeed in the agricultural 2+2+2 program.

The estimated prices used to determine costs were obtained from tool and equipment supply catalogs and local hardware and lumber companies.

Tools and Equipment

The following hand tool and equipment list specifies the recommended quantities of each tool needed to teach a class of twenty students, and this is the number that a school should purchase when initiating a 2+2+2 Agricultural Technologies Program for Poultry Products Management.

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Blacksmith anvil, steel face, 150 lbs.	2	$472.55	$945.10
Mowing machine anvil, guard & sickle	1	$109.95	$109.95
Scratch awl, 4"	8	$3.95	$31.60
Hand axe, single bit	2	$12.94	$25.88
Pry bar, 17", rolling head	1	$7.95	$7.95
Wrecking bar, gooseneck, 3/4" X 30"	2	$4.75	$9.50
Wrecking bar, gooseneck, 5/8" X 24"	2	$3.95	$7.90
Booster cable battery tool, h/duty	1	$20.99	$20.99
Sliding-T bevel, w/adjusting screw, 8" to 10" blade	5	$4.49	$22.45
Auger bit, 1/4" to 1" by 16ths (sets)	2	$93.20	$186.40
Countersink, power, straight shank	4	$5.99	$23.96
Countersink bit, rosehead, 3/4" x 5"	4	$9.15	$36.60
Electrician's bit, 1/2" bit	1	$14.69	$14.69
Expansion bit, 7/8" to 3"	2	$18.95	$37.90
Extension bit, 18"	1	$8.99	$8.99
Router bit, round shank, 1/4" to 3/4" (14 pieces/set)	1	$102.99	$102.99
Screwdriver bit, 1/4", 5/16", 3/8", 1/2" (ea.)	1	$1.99	$1.99
Spur bit, 1/4" to 3/4", round shank	1	$20.96	$20.96

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Set boards, demonstration boards for rural electrification lesson plans published by TEA, shopmade	1	$110.00	$110.00
Plumb bob, 12 oz.	1	$13.98	$13.98
Miter box, 4" X 24", w/14 pt. saw	1	$66.88	$66.88
Bit brace, reversible ratchet, 10"	6	$73.65	$441.90
Desk brush or bench duster, 2-1/2" x 10"	5	$7.60	$38.00
Paint brush, 3"	2	$2.99	$5.98
Parts brush, cleaning	5	$1.99	$9.95
Sash brush, 1/2", 3/4", 1", 2" (each)	2	$2.19	$4.38
Steel brush, 1" width X 10-12" overall length	10	$2.36	$23.60
Steel brush, rotary wire, 8"	2	$26.57	$53.14
Cabinet for germicidal safety glasses or goggles	1	$553.00	$553.00
Cabinet for combustible material	1	$631.00	$631.00
Inside calipers, spring 8"	1	$14.72	$14.72
Outside calipers, spring 8"	1	$14.72	$14.72
File card, w/brush	5	$7.10	$35.50
Tow chain, 3/8" x 16' with hooks	1	$78.95	$78.95
Cape chisel, 1/2"	2	$7.95	$15.90
Cape chisel, roundnose, 1/2"	2	$5.60	$11.20
Cold chisel, 1/4" to 1" by 8ths (sets)	2	$33.63	$67.26
Cold or flat chisel, 5/8" (each)	4	$5.09	$20.36
Cold or flat chisel, 1" (each)	4	$6.59	$26.36

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Diamond point chisel, 1/2"	2	$5.60	$11.20
Wood chisel, 1/4" to 1" by 8ths (9 piece set)	1	$107.54	$107.54
Wood chisel, 1/2"	8	$10.50	$84.00
Bar or pipe clamp, adjustable, 3' to 8'	4	$41.42	$165.68
"C" clamp, 4"	6	$5.99	$35.94
"C" clamp, 6"	6	$8.28	$49.68
"C" clamp, 8"	6	$12.66	$75.96
"C" clamp, 10"	6	$15.50	$93.00
Hand screw clamp, 10" opening	8	$17.94	$143.52
Saw clamp	1	$11.87	$11.87
Slump cone, w/rod (for concrete work)	1	$37.50	$37.50
Cutting oil container, 1 gallon capacity	1	$4.09	$4.09
Gasoline container, safety, 5 gal. capacity	1	$37.49	$37.49
Oil container, squirt	6	$10.10	$60.60
Safety can container (waste oil materials)	1	$47.70	$47.70
Solvent container, 5 gal. capacity	1	$37.49	$37.49
Soldering copper, 1-1/2 lb., 2-1/2 lb., 4 lb., each	1	$23.40	$23.40
Soldering copper, electric 300 watts	1	$84.10	$84.10
Extension cord, 25', 14-3 wire, w/GFCI	2	$30.70	$61.40
Extension cord, 50', 14-3 wire, wGFCI	2	$43.80	$87.60
Bolt cutter, 3/8" capacity	1	$51.43	$51.43

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Glass cutter	6	$1.99	$11.94
Pipe cutter, 1-cutter, 1/2" to 2" capacity	1	$82.70	$82.70
Rod cutter, 1/8" to 5/8" capacity	1	$731.50	$731.50
Tubing cutter and flaring set, 3/16 " to 5/8"	1	$39.78	$39.78
Post hole digger	1	$43.43	$43.43
Spring-type divider, 8"	1	$14.72	$14.72
Spring-type divider, 10"	1	$15.63	$15.63
Architect's scale (drafting equipment)	10	$13.95	$139.50
Drafting board	10	$64.00	$640.00
Mechanical drawing sets (drafting)	10	$30.60	$306.00
T-square	10	$17.95	$179.50
Drafting triangle, 30-60 degrees	10	$3.45	$34.50
Drafting triangle, 45-90 degrees	10	$4.25	$42.50
Carborundum stick dresser	1	$9.99	$9.99
Diamond point dresser with guide	1	$252.40	$252.40
Huntington or star dresser	2	$6.99	$13.98
Wood drawknife, 10"	1	$32.10	$32.10
Automatic drill, push type w/points	4	$38.15	$152.60
Breast drill, 1/2" chuck	1	$73.25	$73.25
Hand drill, 1/4" or 1/2"	2	$61.70	$123.40
Star drill, 1/4" to 1" by 8ths			
1/2"	1	$5.10	$5.10
3/8"	1	$4.88	$4.88
5/8"	1	$5.52	$5.52
3/4"	1	$7.08	$7.08

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Twist drill, high speed, straight shank, 1/16" to 1/2" by 64ths (1 set)	1	$24.99	$24.99
Concrete edger	4	$8.00	$32.00
Dry chemical extinguisher, 20 lbs.	4	$39.95	$159.80
Screw extractor, 1/8" to 11/32", square shank, set	1	$5.29	$5.29
Assorted files, 4" to 12", mill, flat, round, square, auger, tapered, thread, and half-round (set of 20)	1	$106.62	$106.62
Concrete float (magnesium)	4	$17.55	$70.20
Bit guage, adjustable, 1/4" to 1"	1	$6.65	$6.65
Compression gauge, w/screw-in adapters	1	$30.29	$30.29
Drill guage, 1/16" to 1/2" by 64ths	1	$7.95	$7.95
Marking guage, 6" of graduation in 16ths	1	$7.55	$7.55
Sheet metal guage, U.S. standard, 0-36 guage	1	$13.90	$13.90
Spark plug guage, .015-.035, .035-.060	2	$3.45	$6.90
Tap and drill guage, 1/16" to 1/2"	1	$28.88	$28.88
Thickness guage, .0015 to .040, set	2	$21.99	$43.98
Thread guage for pitches from 4 to 84	1	$31.99	$31.99
Tool sharpening guage, 30, 59, 70 degrees	2	$6.65	$13.30
Tractor tire guage, combination, liquid and air	1	$5.29	$5.29
Vacuum guage, 0 to 30", pressure 0 to 10 lbs.	1	$19.45	$19.45

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Wire guage, American standard, 0 to 36 wire size	1	$15.99	$15.99
Welding gloves, leather	20	$12.99	$259.80
Oxy-acetylene goggles, 2 pairs for each bench	10	$9.99	$99.90
Safety glasses or goggles, 1 pair per student	20	$6.89	$137.80
Concrete groover, 1" depth groove	2	$8.65	$17.30
Caulking gun, cartridge type	1	$7.95	$7.95
Grease gun, lever operated, cartridge type	1	$19.25	$19.25
Paint gun, 1 qt. capacity w/50' hose and coupling	1	$179.87	$179.87
Soldering gun, 240/325 watts	1	$40.30	$40.30
Stapler gun, 1/4" to 3/8"	1	$14.95	$14.95
Ball pein hammer, 1/2 lb.	2	$9.49	$18.98
Ball pein hammer, 1 lb.	2	$11.48	$22.96
Ball pein hammer, 2 lb.	2	$14.44	$28.88
Brass hammer, 1 lb. or 1-1/2 lb.	1	$24.25	$24.25
Brick hammer, 1-1/2 lb.	1	$16.83	$16.83
Machinist or blacksmith hammer, 2-1/2 lb.	4	$9.13	$36.52
Nail hammer, bell faced, curved claw, 13 oz.	5	$19.12	$95.60
Nail hammer, bell faced, curved claw, 16 oz.	5	$19.12	$95.60
Nail hammer, bell faced, semi-rip, 16 oz.	2	$19.12	$38.24

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Nail hammer, bell faced, rip, 16 oz.	2	$26.02	$52.04
Plastic-tip hammer, 1 lb.	1	$7.44	$7.44
Sledge hammer, 6 or 8 lb.	1	$13.77	$13.77
Tack hammer, magnetic	1	$3.75	$3.75
Tinners hammer, setting, 12 oz.	1	$22.50	$22.50
File handle, 5"	10	$3.99	$39.90
Blacksmith hardie to fit anvil	1	$10.30	$10.30
Broad or half hatchet, 4"	1	$8.94	$8.94
Shingle hatchet	1	$16.95	$16.95
Chain hoist, 1-1/2 ton, w/A-frame	1	$396.00	$396.00
Water hose, w/fittings, 3/4" X 50'	2	$21.88	$43.76
Mortar hoe	1	$19.95	$19.95
Battery hydrometer	1	$4.59	$4.59
Hydraulic jack, portable, 8 ton	1	$25.99	$25.99
Hydraulic jack, portable, 2 ton floor (service jack)	1	$166.60	$166.60
First aid kit	1	$24.95	$24.95
Linoleum knife	1	$4.99	$4.99
Pruning knife	4	$4.99	$19.96
Putty knife, 1" blade	4	$3.70	$14.80
Putty knife, 3" blade	2	$5.61	$11.22
Extension ladder, 24' (wood)	1	$149.99	$149.99

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Step ladder, folding w/paint shelf, 8' (wood)	1	$70.50	$70.50
Testing lamp, 120/240 volts, shopmade	2	$10.00	$20.00
Trouble checking lamp, 25' cord, fixture guard w/3 conductors, h/duty, oil resistant, reel type	2	$39.95	$79.80
Carpenter level, aluminum, 24"	2	$18.32	$36.64
Farm level, set (tripod, target, and rod)	1	$533.00	$533.00
Mason level, wood, 48"	2	$39.95	$79.80
Timing light, ignition, power, 6 and 12 volts	1	$60.65	$60.65
Wood mallet, 1-1/2" X 5" head	10	$8.85	$88.50
Electric engraver marking took, 120 v, 60 cycle, AC w/cord	1	$16.92	$16.92
Ohm meter, volt, ampere-multimeter	1	$33.96	$33.96
Outside micrometer, 0" to 1"	1	$27.88	$27.88
Outside micrometer, 1" to 2"	1	$34.99	$34.99
Outside micrometer, 2" to 3"	1	$39.99	$39.99
Inside micrometer, 2" to 8"	1	$74.88	$74.88
End cutting nipper, 14"	1	$16.95	$16.95
Block plane, length, 6" to 7"	4	$18.93	$75.72
Jack plane, elngth, 12" to 16"	10	$41.88	$418.80
Jointer plane, length, 18" to 22"	1	$46.88	$46.88
Smoothing plane, length, 8" to 10"	6	$35.12	$210.72
Battery pliers, 8"	2	$10.50	$21.00

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Combination pliers, slip joint, 6"	10	$4.49	$44.90
Combination pliers, slip joint, 8" or 10"	4	$8.49	$33.96
Diagonal pliers, 6"	2	$11.12	$22.24
Ignition pliers	1	$13.49	$13.49
Lineman's pliers, 8"	8	$15.27	$122.16
Longnose pliers, 6"	8	$11.57	$92.56
Vise grip pliers	8	$9.30	$74.40
Vise grip pliers, welding	8	$14.82	$118.56
Wire pliers	4	$11.91	$47.64
Master puller set	1	$734.55	$734.55
Staple puller	1	$3.56	$3.56
Aligning punch, 10"	2	$6.49	$12.98
Aligning punch, 15"	2	$7.49	$14.98
Blacksmith punch w/handle, 1/4", 5/16", 3/8", 1/2" (each)	1	$63.59	$63.59
Center punch, 3/8"	4	$3.62	$28.96
Center punch, 1/2"	4	$3.62	$28.96
Pin punch, 1/8", 5/32", 3/16", 5/16", 3/8" (each)	2	$25.14	$50.28
Starting punch, 3/8", 1/2", 5/8", 3/4" each	2	$15.36	$30.72
Wood rasp, 10" to 12", flat and half-round	16	$7.74	$123.84
Burring reamer w/spiral flutes, pipe, 1/4" to 2"	1	$21.95	$21.95
Respirator, disposable type cartridge	2	$21.95	$43.90
Blacksmith rule, 36"	4	$2.99	$11.96

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Metal rule, 6" by 64ths	1	$1.86	$1.86
Wood rule, zig-zag, 6'	12	$15.30	$183.60
Push pull rule, steel rule, 6' to 12'	12	$9.51	$114.12
Back saw, 14 points	4	$12.12	$48.48
Compass saw, 12"	4	$5.43	$21.72
Coping saw	4	$5.39	$21.56
Hack saw, adjustable 10" to 12" frame	8	$7.49	$59.92
Hand saw, crosscut, 8 points	10	$14.16	$141.60
Bow saw, tubular steel frame, 36" blade	1	$10.95	$10.95
Hand saw, crosscut 10 points	10	$14.16	$141.60
Hand saw, rip, 6 points	2	$14.16	$28.32
Industrial trimmers, 12" (scissors)	1	$9.08	$9.08
Cabinet scraper, 3"	2	$7.00	$14.00
Carbon scraper	1	$3.15	$3.15
Electrician scraper, 6"	4	$4.85	$19.40
Gasket scraper	1	$6.00	$6.00
Sand screen (for concrete work)	1	$36.95	$36.95
Cabinet screwdriver, 3" (round shank)	3	$3.10	$9.30
Cabinet screwdriver, 4" (round shank)	3	$5.19	$15.57
Cabinet screwdriver, 6" (round shank)	3	$6.14	$18.42
Offset screwdriver, 6" to 8"	2	$3.29	$6.58
Phillips screwdriver, set no. 1, no. 2, no. 3	2	$8.49	$16.98

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Ratchet screwdriver, spiral, w/3 blades	1	$17.49	$17.49
Short screwdriver, shockproof (stubby)	2	$2.47	$4.94
Standard screwdriver, shockproof, 4" (square shank)	4	$3.15	$12.60
Standard screwdriver, shockproof, 6" (square shank)	4	$4.15	$16.60
Standard screwdriver, shockproof, 10" (square shank)	1	$6.69	$6.69
Handsaw set, adjustable	1	$9.95	$9.95
Nail set, 1/32", 1/16", 3/32", 1/8" each	4	$1.99	$7.96
Rivet set, diameters 1/8 " to 5/16"	1	$68.35	$68.35
Stencil set, 1/2", 1", 2", & 3" letters	1	$43.39	$43.39
Flexible shaft, h/duty, w/1/2" core, spindle w/ 1/2" X 20" thread, fits 1/2" or 3/8" motor shaft, one hp capacity, 2725 or 3450 rpm w/4" wheel guard	1	$39.95	$39.95
Metal shear, capacity 3/4" rounds, 4" X 1/2" mild steel, knives 7" long. One set of extra knives.	1	$495.00	$495.00
Eye shield, clear visor	5	$13.15	$65.75
Grain scoop shovel	2	$27.24	$54.48
Round nose shovel w/long handle	2	$9.95	$19.90
Sharp shooter shovel	4	$16.11	$64.44
Square point shovel	4	$9.95	$19.90
Tin snips, curved, 14"	1	$14.47	$14.47
Tin snips, duckbill, 14"	1	$14.30	$14.30

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Tin snips, straight, 14"	4	$14.25	$57.00
Carpenter square w/rafter table	10	$12.00	$120.00
Combination try square and miter, 9" protractor head and 1 centering head	10	$7.12	$71.20
Try square, 6" wood or metal handle	5	$15.84	$79.20
Steel stamp, letters A to Z, 1/4", set	1	$26.49	$26.49
Steel stamp, numerical 0 to 9, 1/4", set	1	$10.49	$10.49
Pipe stock and die, ratchet threading set, 1/8", 1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"	1	$233.67	$233.67
Oil stone, combination	5	$10.95	$54.75
Wire stretcher	1	$26.99	$26.99
Tachometer, speed 0-5000 rpm; w/dwell angle attachment	1	$295.60	$295.60
Steel tape, flexible, 100'	1	$14.37	$14.37
NC and NF tap and die, screw plate set, 1/4" to 1"	1	$264.99	$264.99
Blacksmith tongs, curved lip	1	$51.50	$51.50
Blacksmith tongs, straight lip for rounds 1/4", 3/8", and 1/2" set	1	$49.50	$49.50
Propane torch	1	$15.95	$15.95
Brick trowel, 5" X 10"	4	$16.65	$66.60
Concrete finishing trowel, 16"	4	$21.15	$84.60
Plastering trowel, 5" X 12"	4	$14.39	$57.56
Blacksmith or mechanic vise, 7"	1	$59.95	$59.95
Drill press vise, 6" opening	2	$35.30	$70.60

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Machinist vise, solid base, 3" jaw	10	$125.11	$1,251.00
Machinist vise, swivel base, 4" jaw	2	$169.89	$359.78
Pipe vise, 1/8" to 3" capacity	2	$27.50	$55.00
Woodworking vise, 5" to 8"	20	$79.87	$1,597.40
Electric arc welder (see power tools)			
Oxy-acetylene, complete w/regulators, wye connections, welding torches, and nozzles, cutting attachments and tips, heatig nozzles hoses, and cylinder trucks	5	$319.99	$1,599.95
Sparklighters	5	$2.79	$13.95
Tip cleaners	5	$3.99	$19.95
Wrenches, torch	5	$6.39	$31.95
Contractor's wheelbarrow, 4-6 cu. ft. capacity, heaped	1	$105.90	$105.90
Adjustable end wrenche, 4", 6", 8", 10", 12", and 15" set	1	$102.00	$102.00
Allen wrenches, head type set screw, sets, (short arm, .050, 1/16", 5/64", 3/32", 7/64"), (long arm, 7/64", 1/8", 19/64", 5/32", 3/16", 7/32", 1/4", 5/16") each	5	$4.99	$24.95
Basin wrenches, self adjusting, forged steel jaws w/return spring 11" handle	1	$16.30	$16.30
Combination wrenches, set, standard 12 point, 3/8" to 1-1/8" by 16ths, 13 wrenches	2	$49.01	$98.02
Ignition wrenches, set of 6 wrenches	1	$52.30	$52.30
Pipe wrenches, set 10", 14", 24"	1	$113.82	$113.82

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Socket wrenches, set,. 12 point, 1/2" drive, 7/16" to 1-1/8" by 16ths, 18" hings handle, extensions 5" and 10" and 10" ratchet	1	$93.18	$93.18
Socket wrenches, set 6 point, 1/2" drive, 1/2", 9/16", 5/8", 3/4" w/socket driver	1	$34.74	$34.74
Socket wrenches, set 6 point, 1/4" drive, 1/4" to 1/2" w/socket driver	1	$23.43	$23.43
Socket wrenche set, 12 point, 3/8" drive, 3/8" to 3/4" by 16th, w/ratchet, speed handle and universal joint, 8" hinge handle, and extensions 3", 8", and 12"	1	$78.67	$78.67
Scket wrench set, deep, 12 point, 3/8" drive, 3/4", 13/16", and 7/8"	2	$12.57	$25.14
Tappet wrench, 7/16" to 7/8" by 16ths	1	$63.90	$63.90
Torque wrench, 0 to 150 inch pounds, 3/8" drive	1	$46.30	$46.30
Torque wrench, 0 to 150 foot pounds, 1/2" drive	1	$46.30	$46.30
Power Tools (These tools must be high quality and of an industrial or commercial type.)			
Battery charger, 6 adn 12 volts, slow charge	1	$155.00	$155.00
Metal and/or pipe bender, 1/2" to 2", hydraulic power, heavy duty (table optional)	1	$635.10	$635.10
High pressure cleaner, wash or steam	1	$1,560.00	$1,560.00
Vacuum cleaner, shop, heavy duty	1	$375.20	$375.20
Air compressor, electric, stationary, 5 hp., 80 gal. tank or smaller, 24 cfm. displacement or less	1	$1,099.99	$1.099.99

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Portable drill, electric, 1/4:", heavy duty, variable speed	3	$106.39	$319.17
Portable drill, electric, 3/8", heavy duty, variable speed	1	$114.24	$114.24
Portable drill, electric, 1/2" heavy duty, w/key locking chuck	1	$142.80	$142.80
Drill press, heavy duty, variable speed, 1/2" chuck	2	$829.48	$1,658.96
Grinder, bench type, 1/2 hp. electric motor w/7" wheels and accessories	2	$120.80	$241.60
Grinder, pedestal, 1 hp. electric motor w/10" wheels and accessories	1	$741.70	$741.70
Portable grinder, electric	2	$94.95	$189.90
Jointer, 6" or 8", complete with guard, fence, stand, and motor	1	$1,162.72	$1,162.72
Concrete mixer, 3-4 cu. ft. capacity w/1/2 hp. electric motor	1	$1,492.50	$1,492.50
Metal cutting nibbler	1	$400.40	$400.40
Wood planer, 10" to 16", complete w/motor and table (13")	1	$1,199.95	$1,199.95
Portable router, electric	1	$174.93	$174.93
Portable belt sander	1	$221.34	$221.34
Portable vibrator sander	1	$139.23	$139.23
Vertical wood cutting saw, 12" or larger w/motor and stand	1	$790.34	$790.34
Circular saw, 10" or 12", tilting arbor	1	$899.00	$899.00
Microscopes	10	$377.00	$3770.00

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Band saw, metal cutting, capacity, 6" x 10" rectangular stock, 9" round stock, 3" X 16" flat stock, heavy duty	1	$875.00	$875.00
Abrasive cut-off saw, 10" to 16" wheel, minimum cutting capacity 1" solid round 2" pipe, 2 to 7-1/2 hp. motor, either single or three phase	1	$1,505.35	$1,505.35
Portable electric hand saw, 7" blade	2	$129.95	$259.90
Portable sabre saw (Bayonet), industrial type	1	$183.20	$183.20
Radial arm saw, 10" to 14" blade	1	$1,900.00	$1,900.00
Electric arc welder, AC or AC/DC (225 amps, minimum w/accressory kit)	10	$419.99	$4,199.90
Electric arc welder, stationary or portable, electric or manual start, 200 to 300 amps. (DC or AC/DC w/ accessory kit)	1	$2,599.99	$2,.599.99
GMA gas metal are (MIG) welder, single or three phase, 60 cycle, minimum 200 amps., wire feeder, gun and power cable, CO2 flow meter, power cord, and chassis	1	$1,529.50	$1,529.50
GTA, gas tungsten arg (TIG) welder, single or three phase, 60 cycle, minimum 250 amps., AC/DC high frequency, w/flowmeter, minimum 200-300 amps. water-cooled gun (if AC/DC welder is available in farm shop, the add-on GTA (TIG) high frequency unit may be purchased in place of the above unit)	1	$2,983.00	$2,983.00
Plasma cutter, 20 amp., 0-100 psi air pressure regulator, 208/230 v, 35/31 primary amps.	1	$1,140.00	$1,140.00
Carbon-arc torch	1	$31.99	$31.99
Slag hammers (1 each station)	10	$11.89	$118.90

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Helmets, lift front, arc welding (2 each station)	20	$17.99	$359.80
Impact wrench, electric or air, 0 to 200 ft. pounds, 1/2" drive	1	$59.95	$59.95
Equipment			
Woodworking bench, wod top w/4 woodworking vises on each bench (approximate size 54" X 64" X 32-1/4"	5	$1,160.80	$5,804.00
Metalworking bench, metal top w/2 machine vises (approximate size 6' X 30" X 32")	4	$687.00	$2,748.00
Tool cabinet, wall	2	$355.00	$710.00
Small Gasoline Engine Tools and Equipment			
Gasoline engine, small (two and four cycle) (horizontal shaft for four cycle)	10	$179.50	$1,795.00
Small hole guage, 1/8" to 1/2" set	1	$59.30	$59.30
Telescoping guage, 1/2" to 4"	1	$46.45	$46.45
Gear puller, small, 2-3 jaw	1	$18.00	$18.00
Coil tester	1	$69.95	$69.95
Torque wrench, 1/4" or 3/8" drive w/adapters, 0 to 150 inch pounds	1	$46.30	$46.30
Small engine tool kit (2 reamers, 3 plug guages, 1 tester, 1 bushing driver and reamer, 1 oil plunger driver and reamer, 2 jet screwdrivers, 1 valve spring compressor, 1 piston ring compressor, 1 clutch wrench, 3 assorted flywheel pullers, flywheel holder, and pilot bushing)	10	$2,219.50	$2,219.50

ITEM	RECOMMENDED QUANTITY	COST PER UNIT	TOTAL COST
Engine Equipment			
Cold chisel, 1/2" cut	10	$3.75	$37.50
Nut driver, 1/4", 5/16", 7/16" (each)(set)	10	$29.45	$294.50
Piston ring expander	10	$8.70	$87.00
Feeler guage	10	$6.10	$61.00
Spark plug guage	10	$3.30	$33.00
Ball pein hammer, 1/2 lb.	10	$9.49	$94.90
Plastic tip hammer	10	$7.44	$74.40
Combination pliers, 7"	10	$6.59	$65.90
Needle nose pliers, 7"	10	$12.95	$129.50
Long nose pliers, 7"	10	$10.95	$109.50
Brass punch, 1/2" X 6"	10	$8.95	$89.50
Steel punch, 5/16"	10	$5.00	$50.00
Phillips screwdrivers, 4"	10	$2.99	$29.90
Phillips screwdrivers, 6"	10	$3.50	$35.00
Standard screwdrivers, 6"	10	$4.79	$47.90
Standard screwdrivers, 8"	10	$5.59	$55.90
Combination wrenches, 3/8", 7/16", 9/16", 1/2" set	10	$34.15	$341.50
Socket wrench set, 6-12 point, 3/8" drive, 1/4" to 13/16" by 16ths, extension 3", hinge handle	10	$86.45	$864.50
Socket wrench set, 3/8" drive, spark plug, 3/4", 13/16", 7/8", speed handle	10	$54.20	$542.00

SUPPLIES AND EQUIPMENT THAT MAY BE NEEDED FOR TEACHING THE 2+2+2 AGRISCIENCE TECHNOLOGY PROGRAM IN POULTRY PRODUCTS MANAGEMENT

In addition to the tools and equipment previously listed, the supplies and equipment listed below are necessary to develop skills and competencies needed by students.

2-3	Gallon pressure sprayers
6	Pair rubber gloves
1	Set of insect and parasite mounts
1	Dissecting set
1	Egg candler
1	Egg scale
1	Surgical scissors
1	Dust gun, eight pound capacity
2	Respirators
1	Set of classes and grades of feed, seed, and fiber products of economic importance in the community

Visual Aids Equipment:

16mm movie projector
35 mm film strip - slide projector
Nonreflective screen for overhead projector
Reflective screen for movie projector
35mm camera
Video tape equipment - recording and playing
Computers (8)
Overhead projector
Video camcorder

XI. COMPETENCY PROFILE

The following competency profile will be completed at the secondary level for those competencies achieved by the student during grades 11 - 12.

The profile will then be sent to the postsecondary institution where it will be updated as the student progresses.

Upon graduation from the postsecondary institution, a copy of the profile will have the college seal affixed, and will be provided to the student for presentation to a proposed employer.

COMPETENCY PROFILE

Secondary School ____________________ Postsecondary School ____________________

Agriculture 2+2 Program Area - Poultry Products Management Career Goal ____________________

Name ____________________ Social Security Number ______________ Age ________

Address ______________________________ Date of Birth ______________

Phone Number ____________________ Sex ________ Racial/Ethnic Designation ______________

Parent's Name ______________________________ Phone Number ______________

Secondary Agriculture Courses Completed

Name of Course	Date Completed		
	Month	Day	Year
AGSC 101 Introduction to World Agricultural Science and Technology			
AGSC 102 Applied Agricultural Science and Technology			
AGSC 221 Introduction to Agricultural Mechanics			
AGSC 231 Animal and Plant Production			
AGSC 311 Agribusiness Management and Marketing			
AGSC 312 Personal Skill Development in Agriculture			
AGSC 321 Agricultural Structures Technology			
AGSC 323 Agricultural Power Technology			
AGSC 332 Animal Science			
AGSC 241 Food Technology			
AGSC 222 Home Maintenance and Improvement (Optional)			

Postsecondary Agriculture Courses Completed

Name Of Course	Date Completed		
	Month	Day	Year
AGRI 1303 Animal Nutrition and Feeding			
AGRI 1304 Animal and Poultry Health Management			
AGRI 1350 Computers in Agriculture			
AGRI 1443 Agricultural Economics			
AGRI 2308 Cooperative Education			
AGRI 2340 Marketing of Agricultural Products			
AGRI 2373 Poultry Management			
AGRI 2406 Genetics			
AGRI 2483 Reproductive Physiology			
FOOD 2312 Food Quality and Sanitation			
FOOD 2313 Technology of Food Processing			
FOOD 2400 Introductory Food Science			

COMMENTS: ______________________________

Directions: Evaluate the student using the rating scale below. Check the appropriate number to indicate the degree of competency. The rating for each of the tasks should reflect job readiness.

Rating Scale:
4 Skilled - can work independently with no supervision
3 Moderately Skilled - can perform job completely with limited supervision
2 Limited Skill - requires instruction and close supervision
1 No Exposure - no experience or knowledge in this area

A. PERFORMING SUPERVISORY AND MANAGEMENT FUNCTIONS

4	3	2	1	
☐	☐	☐	☐	1. Hire Production Workers
☐	☐	☐	☐	2. Dismiss Production Workers
☐	☐	☐	☐	3. Prepare Payroll
☐	☐	☐	☐	4. Purchase new or used equipment
☐	☐	☐	☐	5. Lease equipment
☐	☐	☐	☐	6. Purchase supplies
☐	☐	☐	☐	7. Assign duties
☐	☐	☐	☐	8. Train employees
☐	☐	☐	☐	9. Keep records of income and expenses
☐	☐	☐	☐	10. Deposit receipts
☐	☐	☐	☐	11. Pay bills
☐	☐	☐	☐	12. Keep feed consumption records
☐	☐	☐	☐	13. Keep egg production records
☐	☐	☐	☐	14. Keep egg quality records
☐	☐	☐	☐	15. Keep poultry mortality records
☐	☐	☐	☐	16. Review production contract
☐	☐	☐	☐	17. Keep equipment servicing and maintenance records
☐	☐	☐	☐	18. Arrange for sale of poultry and eggs
☐	☐	☐	☐	19. Arrange financing
☐	☐	☐	☐	20. Obtain insurance on house and equipment
☐	☐	☐	☐	21. Arrange for construction of poultry house
☐	☐	☐	☐	22. Arrange for purchase of land
☐	☐	☐	☐	23. Arrange for purchase of poultry house
☐	☐	☐	☐	24. Purchase litter
☐	☐	☐	☐	25. Contact flock super-visor or vet when birds appear to
☐	☐	☐	☐	26. Purchase fuel

B. PREPARING THE HOUSE FOR BIRDS

4	3	2	1	
				1. Order Feed
				2. Clean walls, screens, ceilings, and equipment
				3. Clean feed bins
				4. Remove used litter with loader
				5. Remove liquid manure with pump
				6. Dispose of used litter
				7. Prepare litter for reuse
				8. Disinfect building and equipment
				9. Add clean litter
				10. Prepare brooders for reuse
				11. Prepare automatic feeders
				12. Prepare automatic waterers
				13. Set up temporary feeders and waterers
				14. Locate curtains for partial house brooding
				15. Install brooder guards for young birds
				16. Service light fixtures
				17. Prepare nests for reuse

C. CARING FOR BIRDS

				1. Adjust lighting
				2. Adjust building heating units
				3. Adjust ventilation system
				4. Adjust supplemental (evaporative) cooling system
				5. Fill temporary feeders and waterers
				6. Store temporary feeders and waterers
				7. Dispose of dead birds
				8. Keep birds free of ectoparasites (mites & lice)
				9. Keep poultry houses and premises free of house flies
				10. Control rodents
				11. Administer medications
				12. Clean medicator
				13. Clean feeders and waterers
				14. Adjust feeders and waterers
				15. Record daily water consumption
				16. Record daily feed consumption
				17. Provide range shelters for turkeys
				18. Control range predators
				19. Set up waterers for range turkeys
				20. Fill waterers for range turkeys
				21. Set up feeders for range turkeys
				22. Fill feeders for range turkeys
				23. Adjust temperature and humidity in egg storage room
				24. Cull layers
				25. Move turkeys from one facility to another

D. PREPARING PRODUCTS FOR MARKET

4	3	2	1	
				1. Gather and pack eggs
				2. Clean eggs (hand method)
				3. Grade eggs
				4. Refrigerate eggs
				5. Remove feed and water from birds prior to market

E. MAINTAINING BUILDINGS, GROUNDS, AND MACHINERY

4	3	2	1	
				1. Mow grass
				2. Maintain all-weather road
				3. Clean drainage ditches
				4. Apply herbicides
				5. Store and inventory supplies
				6. Paint buildings
				7. Repair roof (small leaks)
				8. Tighten doors
				9. Clean air inlets
				10. Inspect buildings for unwanted air filtration
				11. Test alarm system
				12. Test standby power system
				13. Service all fuel powered machinery
				14. Maintain in-house equipment

F. RECEIVING

4	3	2	1	
				1. Handle birds
				2. Stun and kill birds
				3. Scald and pick birds

G. EVISCERATING

4	3	2	1	
				1. Prepare carcass
				2. Present carcass for USDA inspection
				3. Trim carcass
				4. Present carcass for final USDA inspection

H. PACKING

4	3	2	1	
				1. Chill carcass or parts
				2. Grade carcass or parts
				3. Size carcass or parts
				4. Tub carcass or parts

I. FAST FOOD CUT-UP

4	3	2	1	
				1. Co-ordinate products
				2. Separate birds
				3. Observe quality
				4. Package products

J. DEBONING

4	3	2	1	
				1. Halve birds
				2. Package legs
				3. Debone front half
				4. Tub and weigh parts

K. INSTANT QUICK FREEZING

4	3	2	1	
				1. Pack in freezer
				2. Perform glaze test
				3. Package parts

L. STORAGE

4	3	2	1	
				1. Separate product
				2. Rotate products to coolers
				3. Conduct inventory

M. SHIPPING

4	3	2	1	
				1. Coordinate route sales
				2. Sanitize trucks
				3. Maintain vehicle temperature control
				4. Generate billing

N. PLANT SANITATION

4	3	2	1	
				1. Remove waste products
				2. Prepare chemicals
				3. Sanitize the facilities and equipment
				4. Perform final inspection

XII. STUDENT MONITORING AND FOLLOW-UP

The following student monitoring and follow-up instrument is the one that will be used to monitor and follow the student one year after graduation from the postsecondary institution.

At the present time, the 2+2 User's Group is considering adopting an instrument to be used for all 2+2 programs. At the time of this report that has not taken place.

Northeast Texas Community College
Project LONESTAR
Statistical Information Request

What is your **primary** reason for attending Northeast Texas Community College? (please check one)

☐ 1. Get a Job
☐ 2. Improve Skills Needed in Current Job
☐ 3. Get a Better Job
☐ 4. Maintain Licensure
☐ 5. Earn a Certificate
☐ 6. Earn a Two-Year Degree
☐ 7. Earn Credit to Apply to a Four-Year Degree
☐ 8. Personal Enrichment
☐ 9. Other

How long do you plan on being at Northeast Texas Community College? (please check one)

☐ 1. One Semester Only
☐ 2. Two Semesters
☐ 3. One Year
☐ 4. Two Years
☐ 5. Three Years
☐ 6. More Than Three Years

What is your current employment status? (please check one)

☐ 1. Employed Full-time (40 hours or more per week)
☐ 2. Employed Part-time (Less than 40 hours per week)
☐ 3. Employed as a Homemaker
☐ 4. Not Employed, Seeking Work
☐ 5. Not Employed, Not Seeking Work

What is your **previous** college-level academic experience? (please check one)

☐ 1. None
☐ 2. Some Postsecondary Education
☐ 3. Postsecondary Award, Certificate, or Diploma
☐ 4. Associates' Degree
☐ 5. Bachelor's Degree
☐ 6. Master's Degree
☐ 7. Doctoral Degree
☐ 8. First-professional Degree

If you consider yourself to be in any of the following categories, please check one.

☐ 1. Handicapped
☐ 2. Limited English Proficiency
☐ 3. Single Parent/Homemaker
☐ 4. Learning Disability
☐ 5. Culturally Disadvantaged
☐ 6. Academically Disadvantaged
☐ 7. Economically Disadvantaged
☐ 8. Physical Disability
    ☐ Deaf
    ☐ Deaf-Blind
    ☐ Hard of Hearing
    ☐ Orthopedically Impaired
    ☐ Other Health Impaired
    ☐ Speech Impaired
    ☐ Visually Handicapped

How did you receive your schedule of classes? (please check one)

☐ 1. Called NTCC and it was mailed to you.
☐ 2. Came by NTCC and picked it up.
☐ 3. Newspaper insert.
☐ 4. Other____.

Describe the highest level of formal education obtained by your father.
(please check one)

☐ 1. Not a high school graduate
☐ 2. High school graduate
☐ 3. Some college or associate's degree
☐ 4. Bachelor's degree or above

Describe the highest level of formal education obtained by your mother
(please check one)

☐ 1. Not a high school graduate
☐ 2. High school graduate
☐ 3. Some college or associate's degree
☐ 4. Bachelor's degree or above

TX8-1-F (NRS-DeVAULT) Term:

Tex-SIS FOLLOW-UP

PROJECT FOLLOW-UP

1

44

Please make corrections to the information above if necessary

FOR COLLEGE USE ONLY

Term Date
Mo ☐ ☐ Yr ☐ ☐
16 17 20 21

Completion Code ☐ 71

Group Code
33-
A ☐ O/T
B ☐ LT
C ☐ OTH
D ☐ VC

Course Type Code
74-
1 ☐ Coop
2 ☐ Non-Coop

Major Code
☐☐☐☐☐☐
34 35 36 37 38 39

Target Pop. Code
1 ☐ REG
2 ☐ DAVT
3 ☐ HNCP
4 ☐ LEP
5 ☐ SP/HOME
6 ☐ SB/STER

Special Code ☐ 63

Level Code
76-
2 ☐ Postsecondary
3 ☐ Adult-LT
4 ☐ Adult-ST
5 ☐ OTH

Note: This survey is authorized by Public Laws 20 USC 2312 and 20 USC 2391. While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely.

PLEASE CHECK APPROPRIATE BLOCK(S) WITHIN EACH CATEGORY BELOW.

SECTION A

EVERYONE SHOULD ANSWER THIS SECTION

Do not write in this column

Please respond to the below as appropriate. This information is needed for equal opportunity education and employment reporting.

MAJOR ____________________ (At our college)

SEX
65-
M ☐ Male
F ☐ Female

ETHNIC GROUP
66-
☐ American Indian or Alaskan Native
☐ Asian or Pacific Islander
2 ☐ Black, not of Hispanic Origin
3 ☐ Hispanic
☐ White, not of Hispanic Origin

AGE
67-
B ☐ 16-19
C ☐ 20-24
D ☐ 25-29
E ☐ 30-34
F ☐ 35-44
G ☐ 45-54
H ☐ 55-64
I ☐ 65 and over

1 What was your PRIMARY objective in attending our two-year college?

46-1 ☐ Improvement of existing "job skills"
47-1 ☐ Preparation for "job to be obtained"
48-1 ☐ University transfer credit
49-1 ☐ Personal interest
50-1 ☐ Other (describe) ____________________

2 To what extent has this objective been completed?

51-
1 ☐ Fully completed
2 ☐ Partially completed
3 ☐ Not completed

3 Do you plan to pursue this objective further?

52-
1 ☐ Yes, where? ➡
2 ☐ No

53-1 ☐ At our college
54-1 ☐ At another college
55-1 ☐ Other (describe) ____________

4 How much education is (or was) required to accomplish your educational objective at our college?

56-1 ☐ Selected course(s)
57-1 ☐ Certificate program
58-1 ☐ Two-year associate degree program
59-1 ☐ Other (describe) ____________________

5 What was your principal reason for NOT re-enrolling at our college this semester?

60-1 ☐ Completed needed courses
61-1 ☐ Transportation problems
62-1 ☐ Transferred to another college
63-1 ☐ Found job in occupation related to course(s) completed at this college
64-1 ☐ Conflicting job hours
65-1 ☐ Financial reasons
66-1 ☐ Change of residence
67-1 ☐ Grade problems
68-1 ☐ Dissatisfied with instruction
69-1 ☐ Dissatisfied with content of courses
70-1 ☐ Personal family illness or injury
71-1 ☐ Other personal family reasons
72-1 ☐ Other (describe) ____________________

6 Which statement best describes your feeling about your educational experience at our college?

Do not write in this column.

73-
1 ☐ Very satisfied
2 ☐ Satisfied
3 ☐ Average
4 ☐ Disappointed
5 ☐ Very disappointed

7 If you have completed courses in your MAJOR FIELD OF STUDY please rate them according to how well they fulfilled your individual needs. Students with "undecided/undeclared" majors should skip to next question.

		Very Good 1	Good 2	Average 3	Poor 4	Very Poor 5
a. Quality of instruction	74-	☐	☐	☐	☐	☐
b. Grading, Testing	75-	☐	☐	☐	☐	☐
c. Instructor interest	76-	☐	☐	☐	☐	☐
d. Content of course(s)	77-	☐	☐	☐	☐	☐
e. Instructional media	78-	☐	☐	☐	☐	☐
f. Class size	79-	☐	☐	☐	☐	☐

8 If you have used any of the below college services, please rate them according to how well they fulfilled your individual needs.

		Very Good 1	Good 2	Average 3	Poor 4	Very Poor 5
a. Financial aids	34-	☐	☐	☐	☐	☐
b. Counseling	35-	☐	☐	☐	☐	☐
c. Job placement services	36-	☐	☐	☐	☐	☐
d. Course advisement	37-	☐	☐	☐	☐	☐
e. Tutoring services	38-	☐	☐	☐	☐	☐
f. Veterans services	39-	☐	☐	☐	☐	☐
g. Learning lab. packages	40-	☐	☐	☐	☐	☐
h. Student activities	41-	☐	☐	☐	☐	☐
i. Library services	42-	☐	☐	☐	☐	☐

9 Do you currently have a college degree or certificate?

DMA ☐ ☐ ☐ ☐ ☐ ☐

73-
☐ Yes, what? ➡
☐ No

74-
1 ☐ Certificate
2 ☐ Associate Degree
3 ☐ Bachelor's
4 ☐ Master's
5 ☐ Doctorate
6 ☐ Other ____________

(Degree or Certificate Field of Study)
____

10 What is your current educational status? (Check one)

43-
1 ☐ Currently attending school
2 ☐ Not currently attending school

11 What is your current employment status? (Check one)

44-
1 ☐ Employed (Includes all employment, even if below your qualifications; **does not include full-time military service**)
2 ☐ Employed (Full-time military service)
3 ☐ Unemployed (Not employed, but actively seeking employment)
4 ☐ Not in labor force (Not employed and not seeking employment because of choice, illness, full-time student status, retirement, pregnancy or other such reason)

OVER PLEASE!

BELOW SPACE RESERVED FOR COMMENTS

BEST COPY AVAILABLE

MAJOR ____________ CODE ☐ ☐ ☐ ☐ ☐ ☐

SECTION B

IF YOU ARE CURRENTLY EMPLOYED, OR IN FULL-TIME MILITARY SERVICE, PLEASE ANSWER THIS SECTION. OTHERWISE, SKIP TO SECTION C.

Do not write in this column.

1 Please provide the following information on your present job.

Name of Company or Firm (If self-employed, please write self.)

Company or Firm Mailing Address

City State (57) Zip Code

Your Job Title

Your Job Duties

2 Is this job related to the courses you have completed at our college?

62- 1 ☐ Yes, it is directly or closely related
2 ☐ No, it is only remotely related or is not related at all

3 What is your current salary (gross)? (Do not add in overtime.) This information, when combined with others in your field of study, will provide valuable information to other individuals in their own career planning.

(Check one)

$ ________ . ________ PER 1 ☐ HOUR 2 ☐ WEEK 3 ☐ MONTH 4 ☐ YEAR
(63) (70)

4 The salary in the preceding item is based on how many hours per week employment?

Dates of Employment

______ Hours per Week From ________ To ________
(71-72)

5 We periodically conduct surveys of employers to help us evaluate the courses we offer and to advise us on other courses and programs which are needed. If we may contact your immediate supervisor so he or she can have the opportunity to participate in such a survey, please supply the below information.

Supervisor's Last Name First Name M.I.

Supervisor's Job Title

Please provide address if different from your company address

6 Please check below if the course(s) you took at our college helped you in your occupational area in any of the following ways.

43-1 ☐ Helped to obtain job
44-1 ☐ Helped performance on present job
45-1 ☐ Helped advance on present job
46-1 ☐ None of the above
47-1 ☐ Other (describe) ________

7 How would you rate the training you received at our college in relation to its usefulness to you in performing your job?

48- 1 ☐ Very Good
2 ☐ Good
3 ☐ Average
4 ☐ Poor
5 ☐ Very poor

8 Would you recommend the course(s) taken at our college to others employed in positions similar to yours?

49- 1 ☐ No
2 ☐ Undecided
3 ☐ Yes

9 Were you employed in your occupational area PRIOR to enrolling in the course(s) completed at our college?

50- 1 ☐ No
2 ☐ Yes

SIC 45 ☐ 46 ☐ 47 ☐
EJT 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ ☐ ☐ ☐ ☐
SI 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐
HR 71 ☐ 72 ☐
BJT 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ ☐ ☐ ☐ ☐

SECTION C

IF YOU HAVE ENROLLED IN ANOTHER COLLEGE SINCE YOUR ENROLLMENT AT OUR COLLEGE, PLEASE ANSWER THIS SECTION. OTHERWISE, SKIP TO SECTION D.

Do not write in this column.

1 Please provide the below information on your current (or most recently attended) college.

Name of College

City and State

Your Current Major Field of Study

2 Did you have problems transferring to the college indicated above?

65- 1 ☐ Yes, what? → 66-1 ☐ Transferring credit hours
67-1 ☐ Transcript problems
68-1 ☐ Admission problems
69-1 ☐ Other (describe) ________
2 ☐ No

3 How many credit hours earned at our college were not accepted at the college indicated above?

70- 1 ☐ All credit hours accepted
2 ☐ Lost 1 - 3 credit hours
3 ☐ Lost 4 - 6 credit hours
4 ☐ Lost 7 - 12 credit hours
5 ☐ Lost 13 - 21 credit hours
6 ☐ Lost more than 21 credit hours

4 In your opinion, how well did our college prepare you for continuing your education?

71- 1 ☐ Very good
2 ☐ Good
3 ☐ Average
4 ☐ Poor
5 ☐ Very Poor

5 If you are currently enrolled in college, please indicate your current status and classification at the college indicated above.

STATUS

72- 1 ☐ Part-time student (Less than 12 hours)
2 ☐ Full-time student (12 or more hours)

CLASSIFICATION

73- 1 ☐ Freshman
2 ☐ Sophomore
3 ☐ Junior
4 ☐ Senior
5 ☐ Graduate student

6 How many credit hours earned at our college were successfully transferred to another institution?

______ Credit hours transferred
(74-76)

7 What term and year did you first enroll at your transfer institution?

______ Term ______ Year

TC 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐
TMC 57 ☐ 58 ☐ 59 ☐ 60 ☐ ☐ ☐ ☐ ☐
TYP 77 ☐ 78 ☐ 79 ☐

SECTION D

ALL STUDENTS SHOULD ANSWER THIS SECTION.

1 Approximately how many credit hours have you completed at our college? Please mark appropriate column.

74- 1 ☐ None
2 ☐ 1 - 10
3 ☐ 11 - 20
4 ☐ 21 - 30
5 ☐ 31 - 40
6 ☐ 41 - 50
7 ☐ 51 - 60
8 ☐ More than 60

2 How do you see the course(s) completed at our college in terms of your career plans:

76-1 ☐ of immediate, direct benefit
77-1 ☐ of long term, direct benefit
78-1 ☐ of indirect benefit
79-1 ☐ of no benefit

3 Are you interested in taking other courses at our college? You may include courses not presently offered by our college.

80- 1 ☐ No
2 ☐ Yes: what course(s)? ________

4 We would appreciate any comments regarding how we could improve the course(s) you have completed and/or services we have provided. Please use the below space (front and back) for your comments.

NRS-DeVAULT

BELOW SPACE RESERVED FOR COMMENTS

(Use reverse side for additional space)

THANK YOU FOR ASSISTING US IN OUR SURVEY! PLEASE RETURN THIS FORM IN THE PRE-PAID ENVELOPE AS SOON AS POSSIBLE!

TX8-4-E (EMP-DeVault) Term:

Tex-SIS FOLLOW-UP

☐ —1

PROJECT FOLLOW-UP

Please make corrections to the information above if necessary.

Note: This survey is authorized by Public Laws 20 USC 2312 and 20 USC 2391. While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely.

☐ —44

FOR COLLEGE USE ONLY

SEX

65-
- M ☐ Male
- F ☐ Female

ETHNIC GROUP

66-
- 5 ☐ American Indian or Alaskan Native
- 4 ☐ Asian or Pacific Islander
- 2 ☐ Black, not of Hispanic Origin
- 3 ☐ Hispanic
- 1 ☐ White, not of Hispanic Origin

AGE

67-
- B ☐ 16-19
- C ☐ 20-24
- D ☐ 25-29
- E ☐ 30-34
- F ☐ 35-44
- G ☐ 45-54
- H ☐ 55-64
- I ☐ 65 and over

Term Date

Mo ☐ 16 ☐ 17 Yr ☐ 20 ☐ 21

Completion Code 73 ☐

Course Type Code

74-
- 1 ☐ Coop
- 2 ☐ Non-Coop

Group Code

33-
- A ☐ O/T
- B ☐ UT
- C ☐ OTH
- D ☐ VC

Target Pop. Code
- 1 ☐ REG
- 2 ☐ DAVT
- 3 ☐ HNCP
- 4 ☐ LEP
- 5 ☐ SP/HOME
- 6 ☐ SB/STER

Major Code

☐ 34 35 36 37 38 39

Level Code

76-
- 2 ☐ Postsecondary
- 3 ☐ Adult - LT
- 4 ☐ Adult - ST
- 5 ☐ OTH

EMP Code ☐ 62

Special Code ☐ 63

IDENTIFICATION ____________________

☐ ☐ ☐ ☐ ☐ EJT
46 47 48 49 50

JOB TITLE ____________________

☐ ☐ ☐ ☐

PROGRAM MAJOR ____________________

☐ ☐ ☐ SIC
55 56 57

____

EMPLOYER (COMPANY NAME - INSTITUTION - ORGANIZATION, ETC.)

1 **Is the job title and status of this individual accurate?**

58-
- 1 ☐ Yes
- 2 ☐ No: IF NO, please describe change(s) below.

____

____

2 **What is your relationship with this individual?**
- 59-1 ☐ Employer
- 60-1 ☐ Supervisor
- 61-1 ☐ Personnel staff
- 62-1 ☐ Co-worker
- 63-1 ☐ Other (describe) ____________________

____

OVER PLEASE!

3

Please rate the training received by this individual in the following personal skill areas. Please respond only to those areas you feel are appropriate.

Do not write in this column.

		Very Good 1	Good 2	Average 3	Poor 4	Very Poor 5
a. Accepting responsibility	64-	☐	☐	☐	☐	☐
b. Punctuality	65-	☐	☐	☐	☐	☐
c. Personal initiative	66-	☐	☐	☐	☐	☐
d. Willingness to learn	67-	☐	☐	☐	☐	☐
e. Co-worker cooperation	68-	☐	☐	☐	☐	☐
f. Management cooperation	69-	☐	☐	☐	☐	☐
g. Work attendance	70-	☐	☐	☐	☐	☐
h. Work attitude	71-	☐	☐	☐	☐	☐
i. Personal appearance	72-	☐	☐	☐	☐	☐
j. Compliance with policies	73-	☐	☐	☐	☐	☐

4

Please rate the training received by this individual in the following technical skill areas. Please respond only to those areas you feel are applicable to the occupational area.

		Very Good 1	Good 2	Average 3	Poor 4	Very Poor 5
a. Mathematical skills	34-	☐	☐	☐	☐	☐
b. Technical knowledge	35-	☐	☐	☐	☐	☐
c. Organizational ability	36-	☐	☐	☐	☐	☐
d. Communication skills	37-	☐	☐	☐	☐	☐
e. Problem solving skills	38-	☐	☐	☐	☐	☐
f. Work quality	39-	☐	☐	☐	☐	☐
g. Work quantity	40-	☐	☐	☐	☐	☐
h. Manual dexterity	41-	☐	☐	☐	☐	☐
i. Meeting the public	42-	☐	☐	☐	☐	☐
j. Following instructions	43-	☐	☐	☐	☐	☐
k. Operation of equipment	44-	☐	☐	☐	☐	☐

5

What is your overall rating of the training received by this individual as it relates to the requirements of his or her job?

45–
- 1 ☐ Very good
- 2 ☐ Good
- 3 ☐ Average
- 4 ☐ Poor
- 5 ☐ Very poor

6

What, in your opinion, is the job outlook for program employees of this particular occupational field?

Do not write in this column.

Present 46–		Future 47–
1 ☐	Very good	1 ☐
2 ☐	Good	2 ☐
3 ☐	Average	3 ☐
4 ☐	Poor	4 ☐
5 ☐	Very poor	5 ☐

7

As a result of this person's training, how would you rate his or her preparation in relation to other employees in his or her working group who did not receive such training?

48–
- 1 ☐ No basis for comparison
- 2 ☐ Individual is better prepared
- 3 ☐ Both are about the same
- 4 ☐ Individual is less prepared

8

To what extent, if any, has this individual's training added to his or her ability for job placement and advancement?

49–
- 1 ☐ Very much
- 2 ☐ Much
- 3 ☐ Average
- 4 ☐ Very little
- 5 ☐ None

9

What was the primary source(s) for the initial hiring of this individual?

- 50-1 ☐ Employment agency
- 51-1 ☐ College faculty member
- 52-1 ☐ College job placement office
- 53-1 ☐ Mutual acquaintance
- 54-1 ☐ Applicant applied on own initiative
- 55-1 ☐ Other (describe) ____________________

____

____

A

What suggestions do you have for improving the technical and/or personal skills of future employees?

B

What, in your opinion, are additional areas of training (job titles, skills, etc.) in which our school should become involved?

EMP-DeVAULT

THANK YOU FOR ASSISTING US IN OUR SURVEY! PLEASE RETURN THIS FORM IN THE PRE-PAID ENVELOPE AS SOON AS POSSIBLE!

XIII. CAREER LADDER INFORMATION

The following is a career ladder for a student who is interested in pursuing a career in the area of poultry products management. The 2+2 program provides for exit points at different levels with the job benefits and type of skills performed appropriate with the level of education attained. These jobs are only entry level jobs with promotion and benefit increases possible.

EXIT LEVEL	**JOB TITLE**
Postsecondary (Grade 16) **Baccalaureate Degree**	Poultry Farm Manager Processing Plant Supervisor
Postsecondary (Grade 14)	Poultry Farm Assistant Manager Processing Plant Assistant Foreman
Secondary (Grade 12)	Poultry Farm Worker Processing Line Worker

The careers in the poultry industry are not limited to those listed on the previous page.

The following is only a partial list of career opportunities in the poultry science areas.

Field Operations

Breeder Manager
Flock Supervisor
Feed Mill Manager
Growout Farm Manager
Hatchery manager

Research and Technical Support

Poultry Genetic Scientist
Poultry Disease Control Technician
Quality Control/Food Safety Technician
Poultry Nutritionist
Poultry Environmental Technician
Product Development Coordinator

Sales And Marketing

Sales Manager
Advertising/Public Relations
Database Management Specialist
Distribution Manager
Marketing Representative
Computer Programmer
Information Systems Analyist

Processing/Management

Shipping Superintendent
Fresh Processing Superintendent
Processing Plant Manager
Maintenance Superintendent
Further Processing Superintendent

XIV. RECOMMENDED TEACHER APPROVAL CRITERIA

The following is the recommended teacher approval criteria for a secondary agriscience teacher training students for the 2+2+2 Poultry Products Management Program.

TEACHER APPROVAL CRITERIA

Secondary teachers who plan to initiate a 2+2 +2 Agricultural Program in the area of Poultry Products Management or Dairy Products Management should have the following qualifications:

1. The teacher should have a valid Texas Teacher Certificate with Agricultural Science and Technology certification.
2. The teacher should have attended animal science related workshops as approved by the Texas Education Agency.
3. It is not necessary but is recommended that the teacher have taught within the last three years at the time of implementation of the 2+2 program or be a recent graduate (within the past 12 months) of an approved agricultural education program from a Texas college or university.

XV. ARTICULATION AGREEMENT

The following is an example articulation agreement to be signed by the secondary and postsecondary institutions who are interested in providing the agriculture 2+2 +2 curriculum for their students.

AGRICULTURAL OCCUPATIONS 2+2+2 PROGRAM

ARTICULATION AGREEMENT

PURPOSE

1. To eliminate duplication of effort between area secondary and postsecondary educational institutions in the delivery of agriscience courses.

2. To optimize student enrichment by providing coordinated curriculum to insure a continuous learning path, beginning at the secondary level and continuing to the postsecondary level.

3. To assure that students are adequately equipped with the necessary academic and vocational skills to gain and hold employment upon graduation from both secondary and postsecondary levels.

AGREEMENT

1. Secondary institutions which are a party to this agreement hereby agree to:

    a. Evaluate and recruit students who have, in their opinion, necessary qualifications to successfully complete the Agricultural Occupations 2+2 or 2+2+2 Articulated Program.

    b. Offer and maintain for the duration of this agreement the agriscience courses designated as a part of the Agriculture 2+2+2 Articulated Program or a series of courses containing the same competencies.

    c. Maintain necessary records to track and evaluate individual student's progress of required agriscience competencies as contained in the Agricultural Occupations 2+2+2 Articulated Program. Such records will be forwarded to the postsecondary institution upon request.

2. The postsecondary institutions which are a part of this agreement hereby agree to:

    a. Assist secondary institutions which are a party to this agreement in evaluating and recruiting students.

    b. Offer and maintain for the duration of this agreement Applied and Associate Degree curriculum and resources as specified in the Agricultural Occupations 2+2 and 2+2+2 Articulated Program. No student will be allowed to enter the associate degree program without having first successfully completed the competencies required in the secondary portion of the Agricultural Occupations 2+2+2 Articulated Program.

AGRICULTURAL OCCUPATIONS 2+2+2 PROGRAM

ARTICULATION AGREEMENT
Continued

c. Provide an adequately trained faculty to administer and teach the Agricultural Occupations Applied and Associate Degree curriculum.

d. Provide assessment of students upon entry to the postsecondary institution(students must score 80% or greater on materials covered in secondary program) and counsel students regarding the Applied vs the Associate Degree Programs.

e. Continue student records provided by secondary institutions; maintain adequate records during applied or associate degree program; and track student progress through at least one year of employment and provide to employers upon request.

REVIEW AND CHANGE PROCESS

At the end of one year from the date of this agreement, a review of the Articulation Agreement of the Agricultural Occupations 2+2+2 Articulated Program will be conducted. All superintendents, principals, counselors, vocational administrators, instructors from secondary schools, administrators and instructors from postsecondary schools, and industry representatives will be invited to provide input for review and revision.

PROVISION FOR IMPLEMENTATION/TERMINATION

This agreement will become effective upon approval by the President of ____________________________________ College and the Superintendent of ____ Independent School District. Upon implementation, this agreement will continue on an annual basis until one of the parties petitions the other party to end the agreement.

Such petition to end the agreement (1) must be submitted one year in advance of the intent to terminate; (2) must be submitted in writing signed by the college president or school superintendent making the petition; and (3) must be delivered to the second party of the agreement. Delivery of the intent to terminate will constitute formal notification and will serve as grounds for termination one year following the date of delivery.

________________________________ President	______________________________ Superintendent
________________________ College	__________________________ISD
____________________________1990	___________________________1990